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BRUXELLES

V. VERTENEUIL & L. DESMET

IMPRIMEURS-ÉDITEURS

1910

CÓLEOPTERA

FAM. CURCULIONIDÆ

SUBFAM. NANOPHYINÆ

COLEOPTERA

FAM. CURCULIONIDÆ

SUBFAM. NANOPHYINÆ

par ALBERT BOVIE

AVEC 1 PLANCHE COLORIÉE

HISTORIQUE

Le genre *Nanophyes* avait été placé par Schoenherr dans sa tribu des *Cionidae* avec les genres *Cionus*, *Gymnetron* et *Mecinus;* ces deux derniers sont actuellement dans la sous-famille des *Gymnetrinae*. Lacordaire en avait fait, avec *Cionus*, les deux genres composant la tribu des *Cionides,* la cinquante-et-unième de sa classification. Faust, dans *Stett. Ent. Zeit.* (1889), p. 79, range *Nanophyes* dans le groupe des Apionides. Actuellement, *Nanophyes* est considéré comme formant, avec *Microphyes*, une sous-famille particulière s'éloignant des *Cionus* par sa saillie intercoxale, très large chez *Cionus,* et peu large, triangulaire, chez *Nanophyes.*

Distribution géographique. — Schoenherr a connu vingt-sept espèces de ce groupe, Lacordaire en renseigne trente-et-une; le *Catalogus Coleopterorum* de Gemminger & Harold en énumère quarante. Actuellement, on en connait 113 espèces répandues dans toute l'Europe, l'Asie, l'Afrique, y compris Madagascar et l'Australie. Une espèce, importée d'Europe, existe aux Etat-Unis d'Amérique du Nord. (Dernier *Zoological Record* consulté : volume pour 1906).

Caractères. — Mâchoires non cachées par le menton, à découvert, rostre allongé, grêle, cylindrique, scrobes commençant un peu avant le milieu, obliques. Antennes coudées, grêles, assez courtes, scape atteignant les yeux, funicule de cinq articles, massue grande. Yeux arrondis ou subarrondis, presque contigus en dessus. Thorax transversal, sans lobes oculaires, conique. Ecusson très petit, parfois à peine visible. Elytres amples, un peu ou pas plus larges que le thorax, laissant voir une petite

extrémité du pygidium (surtout pendant la vie; après la mort de l'insecte, le pygidium, se contractant, devient souvent caché par les élytres). Hanches antérieures contiguës. Pattes médiocres, cuisses inermes ou dentées, tibias inermes; tarses courts, un ou deux crochets, libres ou soudés en partie. Segments intermédiaires de l'abdomen anguleux à leurs extrémités. Epimères du mésothorax non ascendantes. Corps ovalaire, parfois un peu globuleux, ailé, pubescent.

Deux genres composent actuellement cette sous-famille; on peut les distinguer de la manière suivante :

1. *Bords latéraux du thorax non ou très peu arrondis, base des élytres guère plus large que le thorax* . . . . . 1. Genus NANOPHYES, Schoenherr.

1'. *Bords latéraux du thorax nettement arrondis, base des élytres plus large que le thorax*. . . . . 2. Genus MICROPHYES, Weise.

1. GENUS NANOPHYES, SCHOENHERR

Nanophyes. Schoenherr, Gen. Curc. Vol. 4, p. 780 (1837).
Corimalia. Des Gozis, Rev. Ent. Caen, Vol. 4, p. 129 (1885).
Nanodes. Schoenherr, Disp. Meth. Curc. p. 322 (1826) (préoccupé).
Nanodiscus. Kiesenwetter, Berl. Ent. Zeitschr. Vol. 8, p. 284 (1864).
Sphærula. Stephens, Ill. Brit. Ent. Vol. 4, p. 20 (1831).

Caractères. — Rostre allongé, grêle, cylindrique, régulièrement arqué généralement, parfois presque droit, les scrobes commençant dans sa première moitié. Antennes coudées, grêles, peu allongées, scape atteignant les yeux, en massue à l'extrémité, funicule de cinq articles, massue grande, ovalaire. Yeux assez rapprochés en dessus, arrondis. Prothorax conique, environ moitié moins large à son sommet qu'à sa base, à côtés latéraux droits ou peu arrondis, sans lobes oculaires. Un écusson, parfois très petit et à peine visible à un fort grossissement. Elytres pas ou à peine plus larges que le thorax, ovalaires, convexes, atténuées en arrière, régulièrement striées, ne recouvrant le pygidium qu'en partie (surtout lorsque l'insecte est vivant). Hanches antérieures contiguës, les intermédiaires et les postérieures séparées. Pattes peu robustes, cuisses inermes ou dentées, jambes inermes au bout, droites, tarses courts, le troisième article plus large que le second, un ou deux crochets, libres ou soudés en parties. Segments intermédiaires de l'abdomen anguleux à leurs extrémités. Corps ovalaire ou un peu globuleux, ailé, pubescent, très finement ponctué.

Ce genre se subdivise en trois sous-genres établis sur la forme des crochets des tarses :

1. *Un crochet aux tarses* (**Fig. A**) . . . . . NANODISCUS, Kiesenwetter.
(transversus, *Aubé*).

1'. *Deux crochets aux tarses*. . . . . 2.

2. *Crochets soudés sur leur plus grande longueur* (**Fig. B**) . . . . . NANOPHYES, i. spec.
(hemisphæricus, *Olivier;* globulus, *Germar;* gracilis, *Redtenbacher;* flavidus, *Aubé;* marmoratus, *Goeze;* nitidulus, *Gyllenhal, etc.*)

2'. *Crochets entièrement libres* (**Fig. C**) . . . . . CORIMALIA, Des Gozis.
(pallidus, *Olivier;* pallidulus, *Gravenhorst;* tamarisci, *Gyllenhal;* languidus, *Boheman;* minutissimus, *Tournier, etc.*)

Mœurs et Métamorphoses. — Métamorphoses du *Nanophyes marmoratus* (*lythri*, Fabricius), d'après Xambeu (*Le Naturaliste*, Vol. 23, p. 224 [1901]) :

L'adulte paraît au printemps, gagne les pousses de la plante nourricière, le *Lythrum salicaria*, dont

il ronge les feuilles qu'il crible de petits trous; aux premiers jours de juillet a lieu l'accouplement, puis la femelle, une fois fécondée, pond ses œufs soit dans l'intérieur des bourgeons, soit dans le calice des fleurs : l'œuf est petit, il éclot quelques jours après, donnant la vie à une jeune larve qui ronge l'ovaire,

FIG. A
Tarse et tibias de *N. transversus*, Aubé.

FIG. B
Tarse et tibias de *N. marmoratus*, Goeze.

FIG. C
Tarse et tibias de *N. tamarisci*, Gyllenhal.

le dessous de la fleur; mais celle-ci ne tombe que lorsque la larve est arrivée à son entier développement, ce qui a lieu aux premiers jours d'août.

Larve. — Longueur : 2 millimètres. Corps arqué, blanc jaunâtre; tête lisse, arrondie, avec fossette latérale et cils clairsemés sur la surface; mandibules brunes, tridentées, la dent médiane très aiguë; mâchoires ciliées; segments thoraciques lisses, jaunâtre clair, éparsement ciliés, ainsi que les segments abdominaux dont les bourrelets latéraux sont transversalement plissés, les plis très irréguliers; les derniers segments abdominaux ont une teinte sombre, c'est-à-dire qu'ils sont de la couleur des matières absorbées.

Nymphe. — Longueur : 1,5 millimètre. Corps jaune clair, extrémités plus claires; premier segment thoracique lisse, éparsement cilié, faiblement impressionné, deuxième avec deux impressions, le troisième est triangulairement incisé avec rainurelle latérale, les segments abdominaux portent des petits poils arqués, le segment anal est prolongé en pointe courte, les genoux sont saillants et garnis d'un cil.

La durée de la phase nymphale est de huit à dix jours; l'apparition de l'adulte a lieu quelques jours après, il chemine aussitôt sur les tiges de la salicaire.

A propos des métamorphoses des *Nanophyes tamarius*, ce même auteur dit (*loc. cit.*, p. 225) : la larve de cette espèce vit dans les ovaires du tamarix; lors de la chute de ces ovaires, elle peut, quoique renfermée dans leur intérieur, les faire sauter à la hauteur de 2 à 3 centimètres au-dessus du plan de position, ce saut se répète à des intervalles assez courts; dès que la nymphe a éclos, l'adulte pratique sur les côtés de l'ovaire une petite ouverture de forme arrondie par laquelle il s'échappe; plusieurs exemples de *fruits sautants* nous sont connus aussi par une chenille de *Carpocapsa* et par diverses galles de *Cynipides*.

Plusieurs espèces de *Nanophyes* produisent des galles. Darboux & Houard (*Cat. Syst. Zoocécidies*, 1901) en indiquent les suivantes :

N° 3501, p. 419. *N. telephii*, Bedel. Sur *Sedum telephium*, le long des tiges florifères, renflements charnus, noueux, bien apparents, disposés parfois en séries linéaires.

N° 3965, p. 473. *N. durieui*, Lucas. Sur les tiges et les pétioles d'*Umbilicus horizontalis* cécidies de la taille et de la couleur d'un gros radis déformé.

N° 3966, p. 473. *N. durieui*, Lucas. Sur *Umbilicus pendulinus*, cécidies irrégulières, dures, arrondies ou ovoïdes, isolées ou groupées et d'une teinte carminée très accentuée.

N° 1083, p. 138. *N. niger*, Waltler. Pleurocécidie déformant la tige d'*Erica scoparia*, renflement ovoïde contenant une larve.

N° 1801, p. 223. *N. hemisphaericus*, Olivier. Sur *Lythrum hyssopifolia*. Pleurocécidie déformant la tige, renflement fusiforme ou très allongé.

Distribution géographique des espèces :

1. *N. aegyptiacus*, Pic, Le Frelon, Vol. 8, p. 7 (1900).	Egypte.
2. *N. albicollis*, Fairmaire, Notes Leyd. Mus. Vol. 23, p. 76 (1901).	Madagascar.
3. *N. albomaculatus*, Pic, Ann. Soc. Ent. Fr. Bull. p. 183 (1898).	Madagascar.
albomaculatus, Alluaud, in Grandidier, Hist. Nat. Madag. p. 419 (1900).	
4. *N. albovittatus*, Roelofs, Ann. Soc. Ent. Belg. Vol. 17, p. 173 (1874).	Japon.
5. *N. alienus*, Faust, Oefv. Finska Förh. Vol. 32, p. 103 (1890).	Mongolie.
6. *N. alleni*, Lea, Trans. Roy. Soc. S. Austral. Vol. 31, p. 166 (1907).	Queensland.
7. *N. alluaudi*, Pic, Ann. Soc. Ent. Fr. Bull. p. 182 (1898).	Madagascar.
alluaudi, Alluaud, in Grandidier. Hist. Nat. Madag. p. 419 (1900).	
8. *N. andrewesi*, Faust, Deutsche Ent. Zeitschr. p. 307 (1898). — **Pl., Fig. 9.**	Bengale.
9. *N. annulatus*, Uhagon, De Quibus d. Col. p. 24 (1830).	France méridionale, Italie.
annulatus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 4, p. 782 (1837); Brisout de Barneville, L'Abeille, Vol. 6, p. 320 (1869).	
10. *N. armatus*, Boheman, in Schoenherr, Gen. Curc. Vol. 4, p. 781 (1837).	Cafrerie, Cap Colonie.
armatus, Fåhraeus, Oefv. Vet. Akad. Förh. Vol. 28, p. 252 (1871).	
11. *N. auliensis*, Pic, L'Echange, Vol. 17, p. 90 (1901).	Turkestan.
12. *N. belli*, Heller, Stett. Ent. Zeit. p. 145 (1908).	Inde orientale.
13. *N. bilineatus*, Tournier, Ann. Soc. Ent. Fr. p. 568 (1867).	Algérie.
bilineatus, Brisout de Barneville, L'Abeille, Vol. 6, p. 338 (1869).	
14. *N. biskrensis*, Brisout de Barneville, L'Abeille, Vol. 6, p. 347 (1869). — **Pl., Fig. 7.**	Algérie.
15. *N. brevis*, Boheman, in Schoenherr, Gen. Curc. Vol. 8 (2), p. 195 (1844).	Europe moyenne, Caucase.
brevis, Brisout de Barneville, L'Abeille, Vol. 6, p. 325 (1869).	
var. theresae, Pic, L'Echange, Vol. 16, p. 79 (1900).	France.
16. *N. calceatus*, Faust, Deutsche Ent. Zeitschr. p. 306 (1898).	Bengale.
17. *N. caucasicus*, Pic, Le Frelon, Vol. 6, p. 36 (1898).	Caucase.
18. *N. centromaculatus*, Costa, Nuov. Stud. Calabr. p. 24, pl. 1, f. 3 (1863).	Italie, Sicile, Algérie.
centromaculatus, Brisout de Barneville, L'Abeille, Vol. 6, p. 341 (1869).	
olivieri, Desbrochers, Bull. Acad. Hippon. p. 49 (1866); Fairmaire, Ann. Soc. Ent. Fr. p. 411 (1867).	
var. casifrous, Brisout de Barneville, L'Abeille, Vol. 6, p. 341 (1869).	Sicile, Algérie
19. *N. chinensis*, Faust, Horæ Soc. Ent. Ross. Vol. 24, p. 474 (1890).	Ganssu.
20. *N. circumscriptus*, Aubé, Ann. Soc. Ent. Fr. p. 326 (1864).	France, Suisse.
circumscriptus, Brisout de Barneville, L'Abeille, Vol. 6, p. 323 (1869); Seidlitz, Fauna Transsylv. p. 726 (1891); Fauna Balt. p. 653 (1891).	
latemaculatus, Pic, L'Echange, p. 65 (1900).	
obliteratus, Pic, ibidem, p. 65 (1900).	
21. *N. concretus*, Pascoe, Ann. Mag. Nat. Hist. Vol. 5 (12), p. 94 (1884).	Macassar.
22. *N. crassipes*, Faust, Deutsche Ent. Zeitschr. p. 307 (1898).	Bengale.
23. *N. durieui*, Lucas, Explor Algérie, p. 640, pl. 38, f. 10 (1849).	France méridionale, Espagne, Portugal, Algérie.
durieui, Brisout de Barneville, L'Abeille, Vol. 6, p. 329 (1869); Lucas, Ann. Soc. Ent. Fr. Vol. 5 (3), Bull. p. 106 (1873) (galles); Marseul, Ann. Soc. Ent. Fr. Vol. 5 (10), Bull. p. 78 (1888) (galles); Xambeu, Le Naturaliste, Vol. 23, p. 224 (1901) (métam.); Darboux & Houard, Catal. Syst. Zoocéc. p. 473, nos 3965, 3966 (1901) (galles); Champion, Trans. Ent. Soc. Lond. p. 87, pl. 5 (1903) (mœurs, métam.); Houard, Marcellia, Vol. 5, p. 32 (1906) (galles).	
lucasi, Pic, L'Echange, p. 79 (1900).	
24. *N. exiguus*, Faust, Horæ Soc. Ent. Ross. Vol. 24, p. 475 (1890).	Mongolie.
25. *N. fasciolatus*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 45, p. 242 (1901).	Madagascar.
26. *N. fausti*, Reiter, Deutsche Ent. Zeitschr. p. 161 (1890).	Caucase.

27. *N. finitus*, Pascoe, Ann. Mag. Nat. Hist. Vol. 5 (12), p. 94 (1884). — Sarawak.

28. *N. flavidus*, Aubé, Ann. Soc. Ent. Fr. p. 345 (1850). — Europe méridionale.
flavidus, Brisout de Barneville, L'Abeille, Vol. 6, p. 330 (1869).

29. *N. gallicus*, Bedel, Ann. Soc. Ent. Fr. Vol. 6 (7), p. 170 (1887). — France.

30. *N. gemmarius*, Faust, Wien. Ent. Zeitschr. Vol. 6, p. 210 (1887). — Syrie.

31. *N. gentilis*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 41, p. 179 (1897). — Madagascar.
gentilis, Alluaud, in Grandidier, Hist Nat. Madag. p. 419 (1900).

32. *N. globiformis*, Kiesenwetter, Berl. Ent. Zeitschr. Vol. 8, p. 284, pl. 3, f. 2 (1864). — Grèce.
globiformis, Tavares, Broteria, Vol. 1, p. 42 (1902) (galles).

33. *N. globulus*, Germar, Mag. Ent. Vol. 4, p. 315 (1821); Fauna Ins. Eur. Vol. 12, p. 7 (1817). — Europe boréale et occidentale.
globulus, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 4, p. 784 (1837); Brisout de Barneville, L'Abeille, Vol. 6, p. 323 (1869); Seidlitz, Fauna Transsylv. p. 727 (1891); Fauna Balt. p. 653 (1891).
stramineus, Bach, Käferfauna, Vol. 2, p. 386 (1854).

34. *N. gracilis*, Redtenbacher, Fauna Austr. Vol. 1, p. 370 (1847). — Europe moyenne et méridionale, Algérie.
geniculatus, Aubé, Ann Soc. Ent. Fr. p. 327 (1864); Kiesenwetter, Berl. Ent. Zeitschr. Vol. 8, p. 285 (1864); Brisout de Barneville, LAbeille, Vol. 6, p. 324 (1869); Seidlitz, Fauna Transsylv. p. 727 (1891); Fauna Balt. p. 653 (1891)
obscurior, Pic, Journ. Mac. p. 56 (1901).
? *salicariae*, Fabricius, Spec. Ins. Vol. 1, p. 167 (1781); Panzer, Fauna Germ. Vol. 17, p. 4 (1801).

35. *N. hemisphaericus*, Olivier, Ent. Vol. 5 (83), p. 113, pl. 29, f. 434 (1807). — Europe moyenne et méridionale, Algérie.
hemisphaericus, Boheman, in Schoenherr, Gen. Curc. Vol. 8 (2), p. 192 (1844); Dufour, Ann. Soc. Ent. Fr. p. 651, pl. 19, f. 3 (1854) (larve); Brisout de Barneville, L'Abeille, Vol. 6, p. 321 (1869); Seidlitz, Fauna Transsylv. p. 726 (1891); Fauna Balt. p. 653 (1891); Du Buysson, Ann. Soc. Ent. Fr. Bull. p. 254 (1898) (mœurs); Xambeu, Le Naturaliste, Vol. 23, p. 225 (1901) (métam.); Darboux & Houard, Cat. Syst. Zoocéc. p. 223, nº 1801 (1901) (galles).
lineithorax, Pic, L'Echange, p. 18 (1901).
var. ulmi, Germar, Mag. Ent. Vol. 4, p. 314 (1821); Rosenschoeld, in Schoenherr, Gen. Curc. Vol. 4, p. 784 (1837). — Pl., Fig. 2. — Europe moyenne et méridionale.

36. *N. henoni*, Pic, Miscell. Ent. Vol. 5, p. 28 (1897). — Ismaïla.

37. *N. inaequalis*, Fairmaire, Ann. Soc. Ent. Fr. Vol. 72, p. 241 (1903). — Madagascar.

38. *N. inconspicuus*, Brisout de Barneville, L'Abeille, Vol. 6, p. 345 (1869) — Pl., Fig. 13. — Algérie.

39. *N. indicus*, Faust, Deutsche Ent. Zeitschr. p. 306 (1898). — Bengale.

40. *N. iota*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 444 (1876). — Inde.

41. *N. japonicus*, Roelofs, Ann. Soc. Ent. Belg. Vol. 22, Bull. p. 54 (1879); Vol. 23, p. 20 (1880). — Japon.

42. *N. komaroffi*, Faust, Bull. Soc. Nat. Moscou, Vol. 52 (2), p. 41 (1877). — Russie méridionale.

43. *N. languidus*, Boheman, in Schoenherr, Gen. Curc. Vol. 8 (2), p. 195 (1844). — Russie méridionale.
languidus, Brisout de Barneville, L'Abeille, Vol. 6, p. 337 (1869); Kraatz, Berl. Ent. Zeitschr. p. 47 (1872).

44. *N. latifrons*, Pic, Miscell. Ent. Vol. 5, p. 28 (1897). — Ismaïla.

45. *N. latus*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 444 (1866). — Inde.

46. *N. longipes*, Wollaston, Col. Hesperid. p. 125 (1867). — San Jago.

47. *N. longirostris*, Faust, Ann. Soc. Ent. Fr. p. 515 (1892). — Indochine.

48. *N. lunulatus*, Wollaston, Ann. Mag. Nat. Hist. Vol. 3 (11), p. 218 (1863); Cat. Canar. Col. p. 300 (1864). — Canaries.
lunulatus, Brisout de Barneville, L'Abeille, Vol. 6, p. 342 (1869).

49. *N. maculatus*, Tournier, Ann. Soc. Ent. Fr. p. 569 (1867). — Pl., Fig. 8. — Algérie.
maculatus, Brisout de Barneville, L'Abeille, Vol. 6, p. 348 (1869).

50. *N. maculipes*, Rey, L'Echange, p. 81 (1893). — France.
telephii, Bedel, Ann. Soc. Ent. Fr. Bull. p. 304 (1900); Xambeu, Le Naturaliste, Vol. 23, p. 224 (1901) (métam.); Darboux & Houard, Cat. Syst. Zoocéc. p. 419, nº 3501 (1901) (galles).

51. *N. magnus*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 48, p. 250 (1904). — Madagascar.

52. *N. marmoratus*, Goeze, Ent. Beitr. Vol. 1, p. 413 (1777). — **Pl., Fig. 4.** — Europe, Sibérie occidentale.
angustipennis, Bach, Käferfauna, Vol 2, p. 386 (1854).
fasciatus, Villers, Ent. Vol. 1, p. 191 (1789); Vol. 4, p. 271 (1789).
lythri, Fabricius, Mant. Ins. Vol. 1, p. 102 (1787); Clairville, Ent Helv. Vol. 1, p. 68, pl. 3, f. 3, 4 (1798); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 4, p. 782 (1837); Brisout de Barneville, L'Abeille, Vol. 6, p. 335 (1869); Sahlberg, Not. Fenn. Vol. 11, p. 370 (1871) (var.); Letzner, Jahrb. Schles. Ges. Vol. 60, p. 260, 298 (1883) (var.); Buddeberg, Jahrb. Nass. Ver. Vol. 37, p. 72 (1884) (mœurs); Seidlitz, Fauna Transsylv. p. 726 (1891); Fauna Balt. p. 652 (1891); Calwers, Käferb. pl. 32, f. 19 (1893 ; Xambeu, Le Naturaliste, Vol. 23, p. 224 (1901) (métam.).
pygmaeus, Herbst, Käf. Vol. 6, p. 142, pl. 69, f. 7 (1795).
rufipes, Tournier, Ann. Soc. Ent. Fr. p. 566 (1867).
salicariae, Olivier, Ent. Vol. 5 (83), p. 112, pl. 29, f. 432 (1807).
transversus, Olivier, Encycl. Méth. Vol. 5, p. 497 (1790).
vittatus, Fourcroy, Ent. Par. Vol. 1, p. 124 (1785).
var. bleusei, Pic, Le Frelon, p. 48 (1899). — Espagne méridionale, Algérie.
var. brunneirostris, Rey, L'Echange, p. 83 (1893). — France méridionale.
var. fallax, Rey, ibidem, p. 83 (1893). — France méridionale.
var. mülleri, Reitter, Wien. Ent. Zeit. Vol. 21, p. 196 (1902). — Brigunt.
var. ruficollis, Rey, L'Echange, p. 85 (1893). — France méridionale.
var. rufirostris, Rey, ibidem, p. 83 (1893). — France méridionale.

53. *N. martini*, Brisout de Barneville, Ann. Soc. Ent. Fr. Vol. 6 (3), Bull. p. 25 (1883). — Algérie.

54. *N. maurus*, Pascoe, Ann. Mag. Nat. Hist. Vol. 4 (16), p. 61 (1875). — Australie méridionale, New South Wales.
maurus, Masters, Proc. Linn. Soc. N. S. Wales, Vol. 2 (1), nº 5316 (1887); Lea, Trans. Roy. Soc. S. Austral. Vol. 31, p. 166 (1907).

55. *N. metallicus*, Vitale, Il Natur. Sicil. Vol. 18, p. 136 (1906). — Sicile.

56. *N. minutissimus*, Tournier, Ann. Soc. Ent. Fr. p. 570 (1867). — Russie méridionale, Caucase.
minutissimus, Brisout de Barneville, L'Abeille, Vol. 6, p. 347 (1869).
maculithorax, Pic, Bull. Soc. Ent. Autun (1897).

57. *N. mongolicus*, Faust, Horæ Soc. Ent. Ross. Vol. 24, p. 475 (1890). — Mongolie.

58. *N. morulus*, Vitale, Il Natur. Sicil. Vol. 18, p. 135 (1906). — Sicile.

59. *N. niger*, Waltler, Reise Span. Vol. 2, p. 77 (1835). — Europe méridionale, Algérie : Maroc.
niger, Darboux & Houard, Cat. Syst. Zoocéc. p. 138, nº 1083 (1901) (galles); Tavares, Broteria, Vol. 1, p. 42 (1902) (galles).
ericetorum, Dufour, Excurs. Val. Ossau, p. 87 (1843).
siculus, Boheman, in Schoenherr, Gen. Curc. Vol. 8 (2), p. 191 (1844); Brisout de Barneville, L'Abeille, Vol. 6, p. 319 (1869); Xambeu, Le Naturaliste, Vol. 23, p. 224 (1901) (métam.).

60. *N. nigerrimus*, nom. nov. pour *niger*, Motschulsky (préoccupé). — Ceylan.
niger, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 444 (1866).

61. *N. nigriceps*, Boheman, Resa Eugen. Ent. p. 147 (1859). — Hong-Kong.

62. *N. nigripennis*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 444 (1866). — Inde.

63. *N. nigritarsis*, Aubé, Ann. Soc. Ent. Fr. p. 72 (1862). — Sicile.
nigritarsis, Brisout de Barneville, L'Abeille, Vol. 6, p. 331 (1869).

64. *N. nigritius*, Gredler, Käf. Tirol, Vol. 2, p. 365 (1866). — Tyrol.

65. *N. nigritulus*, Boheman, Resa Eugen. Ent. p. 147 (1859). — Malacca.

66. *N. nigrovarius*, Lea, Trans. Roy. Soc. S. Austral. Vol. 31, p. 167 (1907). — New South Wales.

67. *N. nitidulus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 4, p. 785 (1837). — **Pl., Fig. 3.** — Europe moyenne et méridionale, Syrie, Algérie : Maroc.
nitidulus, Kraatz, Berl. Ent. Zeitschr. p. 47 (1872); Seidlitz, Fauna Transsylv. p. 726 (1891); Fauna Balt. p. 653 (1891).
chevrieri, Boheman, in Schoenherr, Gen. Curc. Vol. 8 (2), p. 193 (1844);

Kiesenwetter, Berl. Ent. Zeitschr. p. 286 (1864); Brisout de Barneville, L'Abeille, Vol. 6, p. 332 (1869).
difficilis, Tournier, Ann. Soc. Ent. Fr. p. 567 (1867).
spretus, Jacquelin Du Val, Gen. Col. Curc. p. 66, note 1 (1855).
var. fuscicollis, Rey, L'Echange, p 83 (1893) — France.
var. fusculus, Rey, ibidem, p. 83 (1893). — France.
var. helveticus, Tournier, Ann. Soc. Ent. Fr. p. 567 (1867). — Suisse.
var. longulus, Wollaston, Cat. Canar. Col. p. 299 (1864). — Canaries.
var. nigromaculatus, Pic, Bull. Soc. Ent. Autun, p. 97 (1897). — Caucase.
var. ruficlavis, Rey, L'Echange, p. 83 (1893). — France

68. *N. notatipennis*, Pic, Miscell. Ent. Vol. 5, p. 28 (1897). — Ismaïla.
69. *N. obliquatus*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 42, p. 488 (1898). — Madagascar.
obliquatus, Alluaud, in Grandidier, Hist. Nat. Madag. p. 419 (1900).
70. *N. ochreatus*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 443 (1866) — Birmanie.
ochreatus, Faust, Ann. Mus. Stor. Nat. Genova, p. 234 (1894).
71. *N. ornatus*, Fairmaire, Notes Leyd. Mus Vol. 23, p. 76 (1901). — Madagascar.
72. *N. palaestinus*, Pic, Le Frelon, Vol. 8, p 7 (1900). — Palestine.
73. *N. palleolus*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 445 (1866). — Ceylan.
74. *N. pallidicornis*, Lea, Trans. Roy. Soc. S. Austral. Vol. 31, p. 167 (1907). — New South Wales.
75. *N. pallidipes*, Pic, Bull. Soc. Ent. Autun, p. 97 (1897). — Caucase.
76. *N. pallidulus*, Gravenhorst, Vergl. Uebers. Zool. Syst. p. 203 (1807). — France méridionale, Italie, Etats-Unis.
pallidulus, Germar, Mag. Ent. Vol. 4, p. 315 (1821); Fauna Ins. Eur. Vol. 12, p. 8 (1817); Rosenschoeld, in Schoenherr, Gen. Curc. Vol. 4, p. 787 (1837); Jacquelin Du Val, Gen. Col. Curc. pl. 28, f. 135 (1855); Brisout de Barneville, L'Abeille, Vol. 6, p. 348 (1869); Le Conte, Proc. Amer. Philos. Soc. p. 220 (1876); Henshaw, Cat. Col. Bor. Amer. nº 8703 (1885); Calwers, Käferb. pl. 32, f. 20 (1893).
var. doriae, Brisout de Barneville, Ann. Soc. Ent. Fr. Vol. 5 (3), Bull. p. 85 (1873). — France méridionale, Italie.
var. liliputanus, Brisout de Barneville, L'Abeille, Vol. 6, p. 349 (1869). — Espagne.
77. *N. pallidus*, Olivier, Ent. Vol. 5 (83), p. 113, pl. 29, f. 444 (1807). — Europe méridionale.
pallidus, Boheman, in Schoenherr, Vol. 8 (2), p. 196 (1844); Brisout de Barneville, L'Abeille, Vol. 6, p. 340 (1869): Tavares, Broteria, Vol. 1, p. 173 (1902) (galles); Ins. Börse, p. 60 (1903) (galles).
var. impunctatus, Rey, L'Echange, p. 83 (1893). — France méridionale.
var. stigmaticus, Kiesenwetter, Ann. Soc. Ent. Fr. p. 649 (1851). — France méridionale.
var. unipunctatus, Rey, L'Echange, p. 83 (1893) — France méridionale.
78. *N. pallipes*, Roelofs, Ann. Soc. Ent. Belg. Vol. 17, p. 173 (1874). — **Pl., Fig. 10.** — Japon.
79. *N. perelegans*, Fairmaire, ibidem, Vol. 45, p. 243 (1901). — Madagascar.
80. *N. picturatus*, Fairmaire, ibidem, Vol. 42, p 487 (1898). — Madagascar.
picturatus, Alluaud, in Grandidier, Hist. Nat. Madag. p. 419 (1900).
81. *N. pilipennis*, Faust, Ann. Soc. Ent. Belg. p. 429 (1889). — **Pl., Fig. 11.** — Congo, Uzambara.
82. *N. plumbeus*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 444 (1866). — **Pl., Fig. 12.** — Inde.
83. *N. poecilopterus*, Brisout de Barneville, L'Abeille, Vol. 6, p. 334 (1869). — Algérie.
84. *N. posticus*, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 4, p. 787 (1837). — France méridionale, Espagne.
posticus, Brisout de Barneville, L'Abeille, Vol. 6, p. 342 (1869).
85. *N. pruinosus*, Faust, Stett. Ent. Zeit. Vol. 46, p. 188 (1885). — Turkestan.
86. *N. pubescens*, Roelofs, Ann. Soc. Ent. Belg. Vol. 17, p. 172 (1874). — Japon.
87. *N. pusio*, Boheman, Resa Eugen. Ent. p. 147 (1859). — Cap Colonie.
88. *N. quadrivirgatus*, Costa, Nuov. Stud. Calabr. Ult. p. 23, pl. 1, f. 4 (1863). — France méridionale, Italie, Dalmatie, Balkans, Grèce, Crète.
quadrivirgatus, Brisout de Barneville, L'Abeille, Vol. 6, p. 345 (1869).
var. setulosus, Tournier, Ann. Soc. Ent. Fr. p. 569 (1867). — Algérie.
var. sexpunctatus, Kiesenwetter, Berl. Ent. Zeitschr. p. 186, pl. 3, f. 3 (1884). — Crète.
var. trilineatus, Brisout de Barneville, L'Abeille, Vol. 6, p. 347 (1869). — Grèce, Turquie, Asie mineure.
89. *N. quadrivittatus*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 443 (1866). — Ceylan.
90. *N. raffrayi*, Pic, Le Naturaliste, p. 46 (1898). — Zanzibar.

91. *N. rubricus*, Rosenhauer, Thier. Andal. p. 298 (1856). — Europe moyenne et méridionale.
rubricus, Brisout de Barneville, L'Abeille, Vol. 6, p. 327 (1869).
92. *N. rufipes*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 444 (1866). — Ceylan.
93. *N. sahlbergi*, Sahlberg. Diss. Ins. Fenn. Vol. 2, p. 51 (1834). — Europe.
sahlbergi, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 4, p. 788 (1837); Brisout de Barneville, L'Abeille, Vol. 6, p. 328 (1869); Seidlitz, Fauna Transsylv. p 727 (1891); Fauna Balt. p. 653 (1891).
brevicollis. Brisout de Barneville, Catal. Grenier, p. 112 (1863).
lateralis, Rosenhauer, Beitr. Ins. Fauna Eur. p. 57 (1857).
94. *N. singularis*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 41, p. 179 (1897). — Madagascar.
singularis, Alluaud, in Grandidier, Hist. Nat. Madag. p. 419 (1900).
95. *N. spinicrus*, Fairmaire Ann. Soc. Ent. Belg. Vol. 48, p. 250 (1904). — Madagascar.
96. *N. subfasciatus*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 144 (1866). — Ceylan.
97. *N. syriacus*, Brisout de Barneville, L'Abeille, Vol. 6, p. 337 (1869). — Syrie.
98. *N. tamarisci*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 4, p. 786 (1837). — **Pl., Fig. 5.** — Europe méridionale.
tamarisci. Gervais, Ann. Soc. Ent. Fr. Bull. p. 94 (1847) (larve); Lucas, ibidem, Bull. p. 64 (1849) (larve); Brisout de Barneville, L'Abeille, Vol. 6, p. 339 (1869); Xambeu, Le Naturaliste, Vol. 23, p, 225 (1901) (métam.).
var. detritus, Rey, L'Echange, p. 83 (1893). — Europe méridionale.
var. rufulus, Rey, ibidem, p. 83 (1893). — Europe méridionale.
var. signatus. Rey, ibidem, p. 83 (1893). — Europe méridionale,
99. *N. tarsalis*, Pascoe, Ann. Mag. Nat. Hist. Vol. 5 (12), p. 95 (1884). — Buru.
100. *N. tesserula*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 45, p. 242 (1901). — Madagascar.
101. *N. testaceus*, Roelofs, Deutsche Ent. Zeitschr. Vol. 23, p. 297 (1879). — Japon.
102. *N. tetrastigma*, Aubé, Catal. Grenier, p. 113 (1863). — France méridionale, Espagne.
tetrastigma, Brisout de Barneville, L'Abeille, Vol. 6, p. 343 (1869).
var. rubens, Aubé, Ann. Soc. Ent. Fr. p. 327 (1864); Brisout de Barneville, L'Abeille, Vol. 6, p. 344 (1869). — **Pl., Fig. 6.** — France méridionale.
103. *N. tinctus*, Fairmaire, Ann. Soc. Ent. Fr. Vol. 72, p. 241 (1903). — Madagascar.
104. *N. transfuga*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 41, p. 180 (1897). — Madagascar.
transfuga, Alluaud, in Grandidier, Hist. Nat. Madag. p. 419 (1900).
105. *N. transversus*, Aubé, Ann. Soc. Ent. Fr. p. 346 (1850). — **Pl., Fig. 1.** — Europe méridionale, Algérie.
transversus, Kiesenwetter, Berl. Ent. Zeitschr. Vol. 8, p. 284, pl. 3, f. 1 (1864); Brisout de Barneville, L'Abeille, Vol. 6, p. 317 (1869).
juniperi, Chevrolat, Rev. Zool. p. 210 (1860).
micaceus, Rey, L'Echange, p. 85 (1893).
var. aureolus, Perris, Ann. Soc. Ent. Fr. p. 299 (1864). — Corse.
var. cuneatus. Kiesenwetter, ibidem, p. 650 (1851). — Espagne.
106. *N. trimaculatus*, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 2, p. 443 (1866). — Ceylan.
107. *N. tristigma*, Rottenberg, Berl. Ent. Zeitschr. Vol. 15, p. 235 (1871). — Sicile.
108. *N. unicolor*, Faust. Deutsche Ent. Zeitschr. p. 234 (1895). — Togo.
109. *N. V-notatus*, Lea, Trans. Roy. Soc. S. Austral. Vol. 31, p. 166 (1907). — New South Wales.
110. *N. wahlbergi*, Boheman, in Schoenherr, Gen. Curc. Vol. 8 (2), p. 194 (1844). — Natal. Cafrerie.
wahlbergi. Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 252 (1871).
111. *N. zanzibaricus*, nom. nov. pour *crassipes*, Pic (préoccupé). — Zanzibar.
crassipes, Pic, Le Natural ste, p. 46 (1898).

Le *Nanophyes pleuralis* Fairmaire (*Ann. Soc. Ent. Belg.* Vol 45, p. 242 [1901]) appartient à un autre genre (probablement dans les *Erirrhininae*) d'après un type que je possède. Son rostre est beaucoup plus long que celui des Nanophyes, ses scrobes commencent près de sa base, le funicule antennaire est distinctement de sept articles, son écusson bien visible, etc. J'ignore s'il en est de même de la variété *lineellus*, du même auteur (*Ann. Soc. Ent. Fr.* Vol. 72, p. 241 [1903]) Toutes deux sont de Madagascar. Je le fais figurer **Pl., Fig. 14.**

2. Genus MICROPHYES, Weise

Microphyes. Weise, Verh. Zool.-bot. Ges. Wien, Vol. 29, p. 482 (1879).

Caractères. — Rostre cylindrique, faiblement et régulièrement arqué, aussi long que la moitié du corps. Antennes insérées près du tiers antérieur du rostre. coudées, le scape atteignant les yeux, funicule de cinq articles, le premier article du funicule près du double plus long que large, les suivants allant graduellement en augmentant, la massue en ovale allongé. Tête petite, yeux très peu saillants, presque arrondis, assez rapprochés en dessus. Thorax presque du double aussi large que long, un peu arrondi en avant, arrondi sur les côtés, près de la moitié plus étroit à son sommet qu'à la base. Ecusson presque invisible. Elytres un peu plus larges à leur base que le thorax, régulièrement arrondies sur les côtés, environ 1 1/4 fois plus longues que larges à leur base, fortement déclives à l'arrière, recouvrant entièrement le pygidium, régulièrement striées. Pattes peu robustes. Hanches antérieures contiguës, les intermédiaires, et surtout les postérieures, éloignées l'une de l'autre, les cuisses postérieures n'atteignant pas l'extrémité des élytres, crochets des tarses petits, libres. Corps globulaire, finement ponctué.

J'ai eu sous les yeux le type du *Microphyes cyanipennis*, Weise, dont j'ai eu l'exemplaire unique en prêt, grâce à l'obligeance de M. Pic; c'est un petit insecte de quatre millimètres de longueur, rostre compris, d'un beau bleu d'acier et ayant beaucoup de ressemblance de faciès avec un *Orobitis cyaneus*.

Le type du genre est le *cyanipennis*, Weise.

Distribution géographique des espèces. — Ce petit genre ne comprend actuellement que deux espèces du Caucase.

1. *M. alutaceus*, Reitter, Verh. Zool.-bot. Ver. Wien, Vol. 30, p. 516 (1880). Caucase.
2. *M. cyanipennis*, Weise, ibidem, Vol. 29, p. 183 (1879). — **Pl., Fig. 15.** Caucase.

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EXPLICATION DE LA PLANCHE

(Les traits indiquent la dimension *totale* de l'insecte, rostre compris.)

Fig. 1. *Nanophyes transversus*, Aubé. (Corse, détermination J. Gérard.)
— 2. *N. hemisphaericus*, var. *ulmi*, Germar. (Autriche, détermination Desbrochers.)
— 3. *N. nitidulus*, Gyllenhal. (Portugal, détermination Desbrochers.)
— 4. *N. marmoratus*, Goeze. (France, détermination Desbrochers.)
— 5. *N. tamarisci*, Gyllenhal. (Suisse, détermination Desbrochers.)

Fig. 6. *N. tetrastigma* var. *rubens*, Aubé. (Biskra, détermination Desbrochers.)
— 7. *N. biskrensis*, Brisout de Barneville. (Algérie, détermination Desbrochers.)
— 8. *N. maculatus*, Tournier. (Algérie, détermination Desbrochers.)
— 9. *N. andrewesi*, Faust. (Belgaum, cotype de Faust.)
— 10. *N. pallipes*, Roelofs. (Japon, cotype de Roelofs.)
— 11. *N. pilipennis*, Faust. (N'guéla, cotype de Faust.)
— 12. *N. plumbeus*, Motschulsky. (Belgaum, détermination Faust.)
— 13. *N. inconspicuus*, Brisout de Barneville. (Biskra, détermination Desbrochers.)
— 14. (? *Nanophyes*) *pleuralis*, Fairmaire. (Madagascar, type de Fairmaire.)
— 15. *Microphyes cyanipennis*, Weise. (Kobi, Caucase; type.)

Bruxelles, 17 Septembre 1909.

COLEOPTERA

FAM. CURCULIONIDÆ

SUBFAM. BRACHYCERINÆ

COLEOPTERA

FAM. CURCULIONIDÆ

SUBFAM. BRACHYCERINÆ

par ALBERT BOVIE

AVEC 2 PLANCHES COLORIÉES ET 1 PLANCHE NOIRE

Caractères. — Les Brachycerinæ, tels qu'on les comprend actuellement, c'est-à-dire tels que les définit Aurivillius, sont caractérisés par un menton grand, recouvrant entièrement les mâchoires, les antennes courtes, droites ou un peu arquées, rarement un peu coudées, leur scape court, obconique, le premier article de la massue seul bien marqué, grand, les autres petits ; les tarses linéaires, leur dessous nu ou poilu, mais non spongieux, leurs articles souvent convexes, comprimés, leur troisième article entier, non bilobé, les crochets grands, libres. Le corps est aptère, plus ou moins squameux.

Ainsi défini, ce groupe comprend les *Microcérides* et les *Brachycérides* de Lacordaire : les *Microcérides* qui formaient la première tribu de sa classification, les *Brachycérides* qui en étaient la sixième tribu; il les avait séparées l'une de l'autre en se basant sur la présence ou l'absence de lobes oculaires au prothorax. J'y ajoute les genres *Synthocus*, *Brotheus* et *Emyxena*, suivant en cela les idées émises par Guy Marshall (*Trans. S. Afr. Philos. Soc.* Vol. 18, p. 89 [1907]), comme formant une sous-tribu nouvelle : les *Brotheini*. *Synthocus* avait été placé par Lacordaire dans ses *Byrsopides*, sous tribu des *Rhytirrhinides;* quant à *Brotheus*, qu'il n'a pas connu en nature, il l'avait mis dans les *Rhyparosomides*, sous-tribu des *Eupagides,* tout en doutant qu'il lui avait assigné sa place exacte.

Schoenherr a connu deux cent six espèces de cette sous-famille, Lacordaire en indique deux cent vingt-trois et, dans le *Catalogus Coleopterum* de Gemminger & Harold, il y en a deux cent quarante-neuf d'énumérées. Actuellement, ce groupe comprend quatre cent huit espèces.

En se basant sur les caractères fournis par les tibias et par le prosternum, les Brachycerinæ se divisent en trois tribus :

TABLE DES TRIBUS

1. *Tibias tronqués à l'extrémité, tarses insérés au milieu de la troncature* . . . . 1. Tribus Microcerini.
1'. *Tibias caverneux à l'extrémité, tarses insérés sur les côtés* . . . . . 2.
2. *Prosternum sans sillon pour loger le rostre* . . . . . 2. Tribus Brachycerini.
2'. *Prosternum muni d'un sillon profond dans lequel le rostre peut venir se loger* . . 3. Tribus Brotheini.

Distribution géographique de la sous-famille. — Ces insectes appartiennent principalement à la faune africaine (y compris Madagascar), d'où viennent presque toutes leurs espèces, sauf quelques *Brachycerus* qui se trouvent en Syrie et sur les bords européens de la Méditerranée. Une espèce remonte même en France jusqu'au Morbihan. Une autre espèce a été indiquée de Sibérie, en réalité elle appartient à une autre famille; il en est de même du *Brachycerus australis*, Germar, d'Australie, qui est un *Amyctérinae*.

Un catalogue de ce groupe (non compris les Brotheini) a été publié par P. Pape dans *Deutsche Ent. Zeitschr.* p. 105-140 [1907] (addenda et corrigenda, même volume, p. 480-482).

1. TRIBUS MICROCERINI

Microcerides. Lacordaire, Gen. Col. Vol. 6, p. 20 (1863).
Episides. Lacordaire, ibidem, p. 21 (1863).
Microcerinæ. Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 9 (1887).

Caractères. — Les Microcerini sont caractérisés par des antennes robustes, courtes, droites ou un peu arquées, jamais coudées, à funicule de six ou sept articles, à massue ayant seulement le premier article bien marqué, les autres confondus l'un dans l'autre, petits, spongieux, le rostre court, épais, plus ou moins allongé, aussi large ou presque aussi large que la tête, les yeux petits, peu saillants; pas d'écusson, le prothorax tronqué en avant, sans lobes oculaires. Les hanches antérieures sont contiguës, les intermédiaires peu distantes, les postérieures assez fortement séparées. Les tibias sont cylindriques, tronqués au bout, les tarses sont insérés au milieu de la troncature. Les tarses sont linéaires, nus ou poilus en dessous, mais non spongieux, leur troisième article cylindrique, entier, jamais bilobé; les ongles sont grands, libres. Le deuxième segment abdominal aussi long ou plus long que le troisième et le quatrième réunis. Le corps est aptère, souvent allongé, peu couvert de squamules.

Aurivillius a publié (*Svensk. Vet.-Akad. Handl.* Vol. 21, p. 1-87, pl. 1-10 [1887]) une remarquable étude monographique de cette tribu; toutes les espèces y sont décrites longuement et y sont figurées; voir aussi, à ce sujet, le travail du même auteur dans *Oefv. Vet.-Akad. Förh.* Vol. 42 (1885).

TABLE DES GENRES

1. *Antennes droites, apicales, funicule de six articles. Scrobes foveiformes, apicales, peu ou pas continuées sur les côtés du rostre.* . . . . . 1. Genus Episus, Schoenherr.
1'. *Antennes presque droites, insérées près du milieu du rostre. Scrobes profondes, latérales, presque conniventes en dessous* . . . . . 2.
2. *Funicule antennaire de six articles, élytres généralement peu convexes au-dessus* . . . . . 2. Genus Microcerus, Schoenherr.
2'. *Funicule antennaire de sept articles, élytres presque globuleuses* . . . 3. Genus Gyllenhalia, Aurivillius.

Distribution géographique de la tribu. — Cette tribu est exclusivement composée d'espèces habitant l'Afrique équatoriale et méridionale.

I. Genus EPISUS, Schoenherr

Episus. Schoenherr, Disp. Meth. Curc. p. 78 (1826).
Lagenisus. Jekel, Col. Jekel. Vol. 3, p. 105 (1875).

Caractères. — Mandibules courtes, larges, épaisses, à peine dentées au bord. Mâchoires cachées, peu poilues, munies de quatre à six épines, palpes courts, triarticulés. Antennes droites, allongées, couvertes de soies, insérées près de l'extrémité du rostre, scape obconique, plus long que les articles suivants, funicule de six articles, à premier article généralement plus long que les suivants, allongé ou subquadrangulaire, les suivants généralement transversaux, massue plus large que le funicule, à premier article seul bien marqué, les suivants petits, spongieux. Rostre cylindrique ou subcylindrique, un peu plus long ou de même longueur que la tête, arrondi ou acuminé des deux côtés de l'extrémité. Scrobes fovéiformes, apicales, très rarement se continuant légèrement sur les côtés et conniventes en dessous. Tête subquadrangulaire, généralement munie au-dessus d'un sillon médian, contiguë avec le rostre ou séparée de celui-ci par une dépression transversale. Yeux latéraux, ovalaires ou oblongs. Prothorax ordinairement allongé, tronqué au sommet et à la base, les côtés inermes ou tuberculeux, le dessus plus ou moins fortement triimpressionné. Pas d'écusson. Elytres toujours plus larges, ovalaires ou subovalaires, munies sur les deuxième, troisième et cinquième interstices de tubercules ou de crêtes élevées. Pattes médiocres, les cuisses postérieures n'atteignant pas l'extrémité des élytres; tibias cylindriques, tronqués à l'extrémité, inermes; tarses cylindriques, les articles 1, 2 et 3 subégaux, crochets libres. Segments abdominaux séparés par une suture droite, le deuxième aussi grand au moins que le troisième et le quatrième réunis. Corps allongé, aptère, ponctué et revêtu d'écailles.

La formule qui précède est empruntée à Aurivillius. Les *Episus* n'atteignent guère au maximum qu'une quinzaine de millimètres de longueur; ils sont généralement d'une teinte variant entre le blanc sale et le brun.

Lagenisus de Jekel ne forme guère qu'un sous-genre pour les espèces du groupe du *cyathiformis* et comprenant les quatres espèces : *cyathiformis*, Gyllenhal; *dorsalis*, Fâhraeus; *tuberosus*, Gerstäcker, et *cognatus*, Fâhraeus.

Distribution géographique des espèces. — On connaît actuellement quarante-quatre espèces d'*Episus*, répandues uniquement en Afrique, principalement dans sa partie méridionale.

1. *E. aculeatus*, Boheman, in Schoenherr, Gen. Curc. (5). Vol. 2, p. 601 (1840). — Cap de Bonne-Espérance.
   aculeatus, Imhoff, Gen. Curc. Vol. 1, nº 25 (1842); Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 12 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 34, pl. 3. f. 7 (1887).
   var. stricticollis, Jekel, Col. Jekel. Vol. 2, p. 119 (1875); Aurivillius, Oefv. Vet -Akad. Förh. Vol. 42, p. 12 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 35, pl. 3, f. 8 (1887). — Orange, Cap de Bonne-Espér.
2. *E. angulicollis*, Aurivillius, Oefv. Vet.-Akad, Förh. Vol. 42, p. 16 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 54, pl. 5, f. 9 (1887). — Cafrerie, Natal, Transvaal.
3. *E. angusticollis*, Fâhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 4 (1871). — Transvaal, Cafrerie.
   angusticollis, Aurivillius, Oefv.Vet -Akad. Förh.Vol. 42, p. 9 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 23. pl. 2, f. 4 (1887).
4. *E. bohemani*, Aurivillius, Oefv. Vet -Akad. Förh. Vol. 42, p. 12 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 37, pl. 3, f. 10 (1887). — Namaqualand, Damaraland, Ovampoland.

5. *E. brevicollis*, Jekel, Col. Jekel. Vol. 2, p. 117 (1875). — Damaraland, Mozambique, Transvaal.
   brevicollis, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 29, pl. 10, f. 2 (887).
   impressicollis, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 11 (1885).
   var. nigrovittatus, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 30 (1887). — Damaraland, Cap de Bonne-Esp.
6. *E. cognatus*, Fåhraeus, Oefv. Vet.-Akad. Förh Vol. 28. p. 5 (1871). — Cafrerie.
   cognatus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol 42, p. 8 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 16, pl 1, f. 8 (1887).
7. *E. contractus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 16 (1871). — Cafrerie, Transvaal, Cap de Bonne-Espérance.
   contractus, Aurivilius, Oefv.Vet.-Akad. Förh.Vol. 42, p. 12 (1885); Svenks. Vet.-Akad. Handl. Vol. 21, p. 36, pl. 3, f. 9 (1887).
8. *E. cyathiformis*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 376 (1833). — Pl. 1, Fig. 1. — Afrique orientale et méridionale.
   cyathiformis, Jekel, Col. Jekel. Vol. 2, p. 106 (1875); Aurivillius, Svensk. Vet -Akad. Handl. Vol. 21, p. 13, pl. 1, f. 1, 2 (1887).
   coenosus, Jekel, Col. Jekel. Vol. 2, p 107 (1875).
   var. parallelus, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 14, pl. 1, f. 4 (1887). — Damaraland.
   var. paucidentatus, Aurivillius, ibidem, p. 15, pl. 1, f. 3 (1887). — Damaraland.
   var. wahlbergi, Jekel, Col. Jekel. Vol. 2, p. 109 (1875); Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 14, pl. 1, f. 5 (1887). — Afrique méridionale.
9. *E. devylderi*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 10 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 24, pl. 2, f. 6 (1887). — Damaraland, Delagoa.
10. *E. dohrni*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42. p. 11 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 33, pl. 3, f. 4 (1787). — Cafrerie, Cap de B.-Espér.
11. *E. dorsalis*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28. p. 4 (1871). — Cafrerie, Transvaal.
   dorsalis, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42. p. 7 (1885); Svensk. Vet -Akad. Handl. Vol. 21, p. 15, pl. 1, f. 6 (1887)
12. *E. dregei*, Boheman, in Schoenherr, Gen. Curc. Vol. 5, p. 595 (1840). — Cap de Bonne-Espérance.
   dregei, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 15 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 48, pl. 5, f. 1 (1887).
   obliquus, Jekel, Col. Jekel. Vol. 2, p. 113 (1875).
   rostratus, Olivier, Encycl. Méth. Vol. 5, p. 186 (1790); Herbst, Käf. Vol. 7, p. 82, pl. 101, f. 5 (1797); Olivier, Ent. Vol 5 (82), pl. 65, pl. 1, f. 4 (1807).
13. *E. echinatus*, Boheman, in Schoenherr, Gen. Curc. Vol. 5, p. 594 (1840). — Cap de Bonne-Espérance.
   echinatus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 14 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 46, pl. 4, f. 8 (1887).
14. *E. elongatus*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 8 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 18, pl. 1, f. 9 (1887). — Cap de Bonne-Espérance.
15. *E. fahraei*, Aurivillius. Oefv. Vet.-Akad. Förh. Vol. 42, p. 10 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 24, pl. 2, f. 5 (1887). — Pl. 1, Fig. 2. — Damaraland.
16. *E. fictus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 597 (1840). — Cafrerie, Cap de B.-Espér.
   fictus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 16 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 52, pl. 5, f. 7 (1887).
17. *E. flexuosus*, Boheman, in Schoenherr, Gen Curc. Vol. 5, p. 599 (1840). — Cap de B.-Esp., Transvaal, Natal, Cafrerie.
   flexuosus, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 4 (1871); Aurivillius, Oefv. Vet.-Akad. Handl. Vol. 42, p. 16 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 53, pl. 5, f. 8 (1887).
18. *E. ganglionicus*, Boheman, in Schoenherr, Gen. Curc. Vol. 5, p. 603 (1840). — Cafrerie.
   ganglionicus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 12 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 34, pl. 3, f. 5, 6 (1887).
19. *E. gibbosus*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 13 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 42, pl. 4, f. 3 (1887). — Cap de Bonne-Espérance.
   var. krebsi, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 42, pl. 4, f. 4 (1887). — Cafrerie.
20. *E. gravidus*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 11 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 31 (1887). — Vaal.
21. *E. hieroglyphicus*, Fåhraeus, Oefv. Vet -Akad. Förh. Vol. 28, p. 3 (1871). — Transvaal, Cafrerie.
   hieroglyphicus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42. p. 10 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 25, pl. 2, f. 7 (1887).

22. *E. hopei*, Boheman, in Schoenherr, Gen. Curc. Vol. 5, p. 600 (1840). Cap de Bonne-Espérance.
hopei, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 11 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 32, pl. 3, f. 2 (1887).
hopei (var.), Aurivillius, ibidem, p. 33, pl. 3, f. 2 (1887).

23. *E. hypocritus*, Gyllenhal. in Schoenherr, Gen. Curc. Vol. 1, p. 375 (1833). Cap de Bonne-Espérance.
hypocritus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 15 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 50, pl. 5, f. 4 (1887).
cristatus, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 5, p. 596 (1840).

24. *E. inermicollis*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 590 (1840). Cap de Bonne-Espérance.
inermicollis, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 28, pl. 3, f. 1 (1887).
dentatus, Boheman, in Schoenherr, Gen. Curc. Vol. 5, p. 592 (1840); Aurivillius, Oefv. Vet -Akad. Förh. Vol. 42, p. 11 (1885).

25. *E. mendosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 377 (1833). Namaqualand.
mendosus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 8 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 19, pl. 1, f. 11 (1887).

26. *E. muricatus*, Boheman, in Schoenherr, Gen. Curc. Vol. 5, p. 598 (1840). Cap de Bonne-Espérance.
muricatus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 15 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 49, pl. 5, f. 2 (1887).
var. dubius, Aurivillius, Svensk. Vet.-Akad. Handl. Vol 21, p. 50, pl. 5, f. 3 (1887). Cafrerie.

27. *E. nodicollis*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 14 (1885); Cafrerie, Cap Bonne-Espér.
Svensk. Vet.-Akad. Handl. Vol. 21, p. 45, pl. 4, f. 7 (1887).

28. *E. oberthuri*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 12 (1885); Sénégal.
Svensk. Vet.-Akad. Handl. Vol. 21, p. 37, pl. 3, f. 11 (1887).

29. *E. opalinus*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 10 (1885); Cap de Bonne-Espérance.
Svensk. Vet.-Akad. Handl. Vol. 21, p. 28, 87, pl. 2, f. 9 (1887).

30. *E. peringueyi*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 9 (1885); Cap de Bonne-Espérance.
Svensk. Vet.-Akad. Handl. Vol. 21, p. 21, pl. 2, f. 2 (1887).

31. *E. punctatus*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 15 (1885); Cap de Bonne-Espérance.
Svensk. Vet.-Akad. Handl. Vol. 21, p. 51, pl. 5, f. 5 (1887).

32. *E. quadrulifer*, Jekel, Col. Jekel. Vol. 2, p. 115 (1875). Cap de Bonne-Espérance.
quadrufiler, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 55, pl. 10, f. 1 (1887).

33. *E. robustus*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 10 (1885); Cap de Bonne-Espérance.
Svensk. Vet.-Akad. Handl. Vol. 21, p. 27, pl. 2, f. 8 (1887).

34. *E. roelofsi*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 14 (1885); Cap de Bonne-Espérance.
Svensk. Vet.-Akad. Handl. Vol. 21, p. 44, pl. 4, f. 6 (1887).

35. *E. rostratus*, Fabricius, Spec. Ins. Vol. 1, p. 194 (1781). Cap de Bonne-Espérance.
rostratus, Thunberg, Nov. Act. Upsal. Vol. 6, p. 32 (1799).
albulus, Lacordaire, Gen. Col. Vol. 6, pl. 61, f. 1 (1863).
thunbergi, Boheman, in Schoenherr, Gen. Curc. Vol. 5, p. 59 (1840); Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 13 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 43, pl. 4, f. 5 (1887).

36. *E. rotundicollis*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 13 (1885); Cap de Bonne-Espérance.
Svensk. Vet.-Akad. Handl. Vol. 21, p. 41, pl. 4, f. 2 (1887).

37. *E. simulator*, Dalman, in Schoenherr, Gen. Curc. Vol. 1, p. 377 (1833). Afrique méridionale (?).
simulator, Gyllenhall, in Schoenherr. Gen. Curc. Vol. 1, p. 593 (1840); Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 8 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 20, pl. 2, f. 1 (1887).

38. *E. spinosus*, Boheman, in Schoenherr, Gen. Curc. Vol. 5, p. 602 (1840). Cap de Bonne-Espérance.
spinosus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 13 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 40 (1887).
spinosus (var.), Aurivillius, ibidem., p. 40, pl. 4, f. 1 (1887).

39. *E. sputatilius*, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 1, p. 378 (1833). Cap de Bonne-Espérance!
sputatilius, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 14 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 46, pl. 4, f. 9 (1887).

40. *E. T-album*, Jekel, Col. Jekel. Vol. 2, p. 11 (1875). Cap B.-Esp., Damaraland.
T-album, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 16 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 51, pl. 5, f. 6 (1887).

41. *E. tenuis*, Fairmaire, Ann. Soc. Ent. Fr. p. 310 (1885). Afrique orientale.

42. *E. truncatus*, Boheman, in Schoenherr, Gen. Curc. Vol. 8 (2), p. 374 (1845). Cap de Bonne-Espérance.
truncatus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 8 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 19, pl. 1, f. 10 (1887).

43. *E. tuberosus*, Gerstäcker, Wiegm. Arch. f. Naturg. p. 68 (1871); Deckens Reise, Vol. 3 (2), p. 217 (1873). Abyssinie, Zanzibar, [N'Gami.
tuberosus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 8 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 16, pl. 1, f. 7 (1887).

44. *E. westermanni*, Aurivillius, Oefv. Vet-Akad. Förh. Vol. 42, p. 9 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 22, pl. 2, f. 3 (1887). Cap de Bonne-Espérance.

2. Genus MICROCERUS, Schoenherr

Microcerus. Schoenherr, Gen. Curc. Vol. 1, p. 441 (1833).

Caractères. — Mandibules courtes et très larges; mâchoires cachées par le menton, munies de six à huit épines, palpes de quatre articles, le premier beaucoup plus large. Antennes presque droites, non coudées, insérées sur les côtés du rostre, à scape obconique, plus ou moins court, plus long que les articles suivants, funicule de six articles, cylindriques, grossissant peu à peu; premier article de la massue plus grand que les suivants, ceux-ci petits. Rostre déclive, épais, conique ou subcylindrique, plus long que la tête, plan et inégal au-dessus. Tête transversale, contiguë au rostre ou séparée de celui-ci par un canal transversal, oblique, munie au-dessus d'un sillon médian, longitudinal et, de chaque côté, souvent une protubérance un peu arrondie. Yeux saillants, arrondis ou ovalaires. Prothorax subquadrangulaire ou transversal, tronqué à la base et au sommet, les côtés parfois inermes, parfois munis d'une épine courte, le dessus inégal. Ecusson invisible. Elytres plus larges que le prothorax et plus longues que larges, ovales ou subovalaires, peu convexes, parfois un peu plane au-dessus, couvertes de petits tubercules. Pattes peu robustes; les hanches antérieures contiguës, les intermédiaires peu distantes, les postérieures fortement séparées, cuisses un peu en massue, celles de la dernière paire n'atteignant pas les extrémités des élytres, tibias linéaires, subcylindriques, inermes à l'extrémité, tronqués à l'extrémité; tarses à articles 1-3 subégaux, cylindriques, le quatrième presque aussi long au moins que les trois autres, crochets assez grands, libres. Segments abdominaux séparés par une suture profonde, le second plus long que le troisième et le quatrième réunis. Corps aptère, peu allongé, ponctué et couvert de nombreuses écailles formant parfois un enduit presque continu.

Les *Microcerus* sont d'une taille plus grande que les *Episus;* ils peuvent atteindre jusqu'à 25 millimètres de longueur. D'un gris brunâtre ou brun, parfois marqué de taches triangulaires plus obscures, leur livrée n'a rien de remarquable comme coloration.

Distribution géographique des espèces. — Les trente-et-une espèces de ce genre décrites à ce jour appartiennent toutes à l'Afrique.

1. *M. abyssinicus*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 37, p. 33 (1893). Abyssinie.

2. *M. albiventer*, Gerstäcker, Monatsbl. Berl. Akad. Wiss. p. 84 (1855); Peters Reise Mossamb. p. 308 (1862). Zambèze, Mozambique.
albiventer, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 18 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 66, pl. 7, f. 2 (1887).

3. *M. annuliger*, Harold, Monatsbl. Berl. Akad. Wiss. p. 265 (1880). Zanzibar.
annuliger, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 18 (1885); Fairmaire, Ann. Soc. Ent. Fr. Vol. 6 (7), p. 311 (1887); Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 65, pl. 7, f. 1 (1887).

4. *M. beschei*, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 729 (1840). Mozambique.
beschei, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 19 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 71, pl. 7, f. 8 (1887).

5. *M. borrei*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 18 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 67, pl. 7, f. 4 (1887). — Afrique méridionale et occidentale.
6. *M. cavirostris*, Fairmaire, Ann. Soc. Ent. Fr. (6), Vol. 7 p. 312 (1887). — Zanguebar, Somaliland.
   cavirostris, Gestro, Ann. Mus. Stor. Nat. Genova, p. 397 (1895).
7. *M. costalis*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 7 (1871). — **Pl. I, Fig. 3.** — Cafrerie, Transvaal, Damaraland.
   costalis, Aurivillius, Oefv Vet.-Akad. Förh. Vol. 42, p. 19 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 73, pl. 7, f. 10 (1887).
8. *M. cretaceus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 727 (1833). — Cafrerie
   cretaceus, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 78 (1887).
9. *M. cribellatus*, Fairmaire, Ann Soc. Ent. Fr. (6), Vol. 7, p. 312 (1887). — Zanguebar.
10. *M. depressus*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 19 (1885); Svensk. Vet. Akad. Handl. Vol. 21, p. 71, pl. 7, f. 7 (1887). — Cafrerie.
11. *M. dorsofumatus*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 28, Bull. p. 47 (1884). — Zanguebar.
   dorsofumatus, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 79 (1887).
12. *M. fahraei*, Jekel, Col. Jekel. Vol. 2, p. 121 (1875). — **Pl. I, Fig. 5.** — N'Gami, Afrique méridionale.
   fahraei, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 19 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 73, pl. 10, f. 4 (1887).
   var. sulcifrons, Aurivilius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 73, pl. 8, f. 1 (1887). — Delagoa.
13. *M fallax*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28. p. 8 (1871) — Cafrerie.
   fallax, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 18 (1885); Svensk. Vet.-Akad. Handl, Vol. 21, p. 64, pl. 7, f. 5 (1887).
14. *M. fissirostris*, Fairmaire, Ann. Soc. Ent. Fr. (6), Vol. 7, p. 313 (1887). — Zanguebar.
15. *M. fossilis*, Aurivillius, Svensk. Vet.-Akad. Handl. p. 61, pl. 6, f. 6, 7 (1887). — Delagoa.
   kirschi. Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 22, p. 81 (1885).
16. *M. grisescens*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 728 (1840). — Cap de Bonne-Espérance.
   griseseeus. Imhoff, Gen. Curc. Vol. 2, nº 17 (1846); Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 19 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 70, pl. 8, f. 3 (1887).
17. *M. idolum*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 443 (1833). — Cap de B.-E., Transvaal.
   idolum, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 17 (1885); Svensk. Vet.-Akad Handl. Vol. 21, p. 61, pl. 6, f. 3 (1887).
   dregei, Lacordaire, Gen. Col. Vol. 6, pl. 21, f. 2 (1863).
18. *M. inaequalis*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 730 (1840). — Cap de Bonne-Espérance.
   inaequalis, Aurivillius, Oefv. Vet.-Akad. Vol. 42, p. 20 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 78, pl. 8, f. 4, 5 (1887).
19. *M. interstitio punctatus*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 19 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 75, pl. 7, f. 9 (1887). — Transvaal.
20. *M. kirschi*, Jekel, Col. Jekel. Vol. 2, p. 125 (1875). — N'Gami.
   kirschi, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 62, pl. 10, f. 5 (1887).
21. *M. latipennis*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 6 (1871). — Cafrerie, Transvaal, Damaraland.
   latipennis, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 17 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 62, pl. 6, f. 2 (1887).
22. *M. melancholicus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 726 (1840). — Cap de Bonne-Espérance.
   melancholicus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 15 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 78, pl. 8, f. 6 (1887).
23. *M. oblongus*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 20 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 77, pl. 8, f. 7 (1887). — Namaqualand.
24. *M. pascoei*, Jekel, Col. Jekel. Vol. 2, p. 121 (1875). — Damaraland.
   pascoei, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 19 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 74, pl. 10, f. 3 (1887).
25. *M. planifrons*, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 74, pl. 8, f. 2 (1887). — Cafrerie, Transvaal.

26. *M. retusus*, Fabricius, Spec. Ins. Vol. 1, p. 195 (1781); Mant. Ins. Vol. 1, p. 120 (1787); Vol. 2, p. 382 (1787); Vol. 3, p. 145 (1787). — Cap de Bonne-Espérance.
retusus, Gmelin, Syst. Nat. Vol. 4, p. 1790 (1789); Olivier, Encycl. Méth. Vol. 5, p, 186 (1790); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 442 (1833); Vol. 5, p. 724 (1840); Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 17 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 59, pl. 6, f. 8 (1887).
? *bimaculatus*, Thunberg, Nov. Act. Upsal. Vol. 6, p. 33 (1799).
ephippiatus, Sparrman, Act. Holm. Vol. 6, p. 52, pl. pl. 3, f. 27 (1785).
var. rotundatus, Aurivillius, Svensk. Akad. Handl. Vol. 21, p. 60, pl. 6, f. 4 (1887). — Cap de Bonne-Esp., Cafrerie.
var. ? *dregei*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 725 (1840).
var. spissus, Aurivillius, Svensk. Vet.-Akad. Handl. Vol. 21, p. 59, pl. 6, f. 5 (1887). — Cap de Bonne-Espérance, Cafrerie, Transvaal.
var. retusus, Herbst, Käf. Vol. 7, p. 83, pl. 101, f. 5 (1795); Olivier, Ent. Vol. 5 (82), p. 62, pl. 1. f. 6 (1807).

27. *M. spiniger*, Gerstäcker, Monatsbl. Berl. Akad. Wiss. p. 83 (1855); Peters Reise Mossamb. p. 307, pl. 18, f. 9 (1862). — **Pl. I, Fig. 4.** — Afrique méridionale.
spiniger, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 17 (1885); Svensk. Vet.-Akad. Handl. Vol. 21. p. 64, pl. 6. f. 1 (1887).

28. *M. subcaudatus*, Gerstäcker, Monatsbl. Berl. Akad. Wiss. p. 85 (1885); Peters Reise Mossamb. p. 308, pl. 18, f. 8 (1862). — Mozambique, Transvaal, Cafrerie.
subcaudatus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 19 (1885); Svensk. Vet -Akad. Handl. Vol. 21, p. 72, pl. 7, f. 6 (1887).

29. *M. tuberifrons*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 37, p. 154 (1893). — Somaliland.

30. *M. tutanus*, Jekel, Col. Jekel. Vol. 2, p. 127 (1875). — Cap de Bonne-Esp., Natal.
tutanus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 19 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 68, pl. 7, f. 3 (1887).

31. *M. vermiculatus*, Fairmaire, Ann. Soc. Ent. Fr. (6), Vol. 7, p. 310 (1887). — Zanguebar.

3. Genus GYLLENHALIA, Aurivillius

Gyllenhalia. Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 20 (1885).

Caractères. — Rostre épais, un peu courbé, légèrement plus long que la tête, ses scrobes très profondes inférieurement, obliques. Antennes légèrement courbées, scape petit, obconique, n'atteignant pas les yeux, funicule de sept articles, allant graduellement en s'élargissant, massue ovale, plus large que le funicule, pointue à l'extrémité. Tête transversale, munie au-dessus en son milieu d'un profond sillon longitudinal et, de chaque côté, au-dessus des yeux, d'une élévation un peu quadrangulaire. Yeux arrondis, proéminents. Thorax aussi long que large, convexe, muni à sa base d'un étranglement, couvert de fortes granulations, les unes arrondies, les autres irrégulières. Ecusson invisible. Elytres plus longues que larges, ovalaires, fortement convexes, globuleuses, brusquement et fortement déclives à l'arrière, couvertes de tubercules régulièrement alignés en lignes parallèles à la suture. Pattes médiocres, peu robustes, cuisses postérieures n'atteignant pas l'extrémité des élytres, tibias inermes, cylindriques, tronqués à l'extrémité, tarses insérés au milieu de la truncature des tibias, les trois premiers articles égaux, ongles grands, libres. Hanches antérieures contiguës, les intermédiaires légèrement séparées, les postérieures très distantes l'une de l'autre. Segments abdominaux séparés par une suture légèrement courbée. Corps aptère, n'ayant que quelques très rares poils, très finement ponctué.

Le genre a été créé par Aurivillius pour un petit Brachycerine d'environ 8 millimètres de longueur, d'un noir sale, se reconnaissant à première vue à ses élytres globuleuses couvertes de petits tubercules. Cet insecte avait été placé par les anciens auteurs dans le genre *Brachycerus*.

Distribution géographique de l'espèce. — La seule espèce constituant actuellement ce genre habite la Colonie du Cap.

1. *G. spectrum*, Fabricius, Spec. Ins. Vol. 1, p. 194, 195 (1781); Mant. Ins. Vol. 1, p. 119 (1787). — **Pl. I, Fig. 6.** Cap de Bonne-Espérance.

spectrum, Gmelin, Syst. Nat. Ins. Vol. 4 (1789); Olivier, Encycl. Méth. Vol. 5, p. 186 (1790); Fabricius, Ent. Syst. Vol. 1 (2), p. 383 (1792); Herbst, Käf. Vol. 7, p. 84, pl. 101, f. 6 (1797); Fabricius, Syst. Eleuth. Vol. 2, p. 415 (1807); Olivier, Ent. Vol. 5 (82), p. 65, pl. 1, f. 5 (1807); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 431 (1833); Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 20 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 80, pl. 9, f. 1, 2 (1887).

2. TRIBUS BRACHYCERINI

Brachycerides. Lacordaire, Gen. Col. Vol. 6, p. 283 (1863).

Caractères. — Antennes robustes, arquées ou imparfaitement coudées, le scape court, les articles de la massue plus ou moins confondus ensemble; le rostre robuste, arqué; les yeux acuminés inférieurement, parfois portés au revers d'une crête située sur le front. Prothorax aussi long que large (*Euretus* excepté). Pas d'écusson. Hanches antérieures contiguës, les intermédiaires contiguës ou séparées, les postérieures séparées. Tarses linéaires, nus ou poilus en dessous, non spongieux, leur quatrième article grand, les crochets grands et libres. Corps aptère.

Les Brachycérides de Lacordaire ne comprenaient que le seul genre *Brachycerus*; actuellement, les cinq genres connus peuvent se répartir de la manière suivante :

TABLE DES GENRES

1. *Hanches intermédiaires contiguës.*
2. *Prothorax aussi long que large.*
3. *Bord antérieur du prothorax non saillant en avant* . . . 1. Genus Protomantis, Schoenherr.
3'. *Bord antérieur du prothorax saillant en avant.*
4. *Yeux non insérés sur des tubercules* . . . . . 2. Genus Brachycerus, Olivier.
4'. *Front portant deux pédoncules latéraux, élevés, dont la partie externe est occupée par les yeux* . . . . . 3. Genus Theates, Fåhraeus.
2'. *Prothorax beaucoup plus long que large* . . . . . 4. Genus Euretus, Péringuey.
1'. *Hanches intermédiaires séparées.* . . . . . 5. Genus Herpes, Bedel.

Distribution géographique de la tribu. — A part une vingtaine d'espèces appartenant à la faune paléarctique, cette tribu ne comprend que des insectes de la faune africaine, y compris Madagascar.

1. Genus PROTOMANTIS, Schoenherr

Protomantis. Schoenherr, Gen. Curc. Vol. 5, p. 721 (1840).

Caractères. — Rostre plus long et plus étroit que la tête, peu arqué, les scrobes obliques et profondes. Tête portant deux crêtes latérales situées au-dessus des yeux. Antennes robustes, arquées, le scape n'atteignant pas les yeux, les articles du funicule allant graduellement en augmentant, massue presque quadrangulaire, tronquée au bout. Yeux peu saillants, acuminés inférieurement, leur partie postérieure s'infléchissant brusquement. Prothorax légèrement plus large que long, anguleusement arrondi sur les côtés; le bord antérieur droit, muni d'un sillon médian longitudinal. Pas d'écusson.

Elytres très légèrement plus larges à leur base que le prothorax, coupées obliquement aux épaules, arrondies sur les côtés, planes en arrière, portant des tubercules placés en séries régulières. Pattes un peu robustes, tarses robustes, linéaires, les trois premiers articles cylindriques, subégaux, le quatrième aussi long que le deuxième et le troisième réunis, crochets grands, libres. Hanches antérieures et intermédiaires contiguës, les postérieures fortement séparées. Segments abdominaux séparés par une suture droite. Corps aptère.

Schoenherr avait placé ce genre entre les *Brachycerus* et lès *Microcerus*. Lacordaire, qui ne l'avait pas vu en nature, l'a mis près des *Microcerus*.

Les *Protomantis* sont des petits Brachycérides d'environ 1 centimètre de longueur, d'un brun varié de noir, parfois agrémenté de quelques taches blanches.

Distribution géographique des espèces. — Trois espèces de la Colonie du Cap constituent actuellement ce genre.

1. *P. dregei*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 723 (1840). Cap de Bonne-Espérance. — Pl. I, Fi. 7.
   dregei, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 22 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 82, pl. 9, f. 3-5 (1887).
2. *P. elegans*, Aurivillius, Oefv. Vet. Akad. Förh. Vol. 42, p. 21 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 83, pl. 9, f. 8 (1887). Cap de Bonne-Espérance.
3. *P. peringueyi*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 21 (1885); Svensk. Vet.-Akad. Handl. Vol. 21, p. 84, pl. 9, f. 6, 7 (1887). Cap de Bonne-Espérance.

2. Genus BRACHYCERUS, Olivier

Brachycerus. Olivier, Encycl. Méth. Vol. 5, p. 181 (1790).
Dyerocera. Pascoe, Trans. Ent. Soc. Lond. p. 334 (1887).

Caractères. — Rostre très robuste, incliné, souvent difforme, anguleux, plus long que la tête dont il est souvent séparé par un sillon, ses scrobes arquées, confluentes en dessous, linéaires. Antennes robustes, arquées, scape n'atteignant pas les yeux, funicule de sept articles, cylindriques, allant en augmentant graduellement, les articles de la massue confondus l'un dans l'autre, celle-ci en cône renversé. Yeux acuminés inférieurement, déprimés, entourés au moins en partie d'un bourrelet. Prothorax plus large que long, a surface souvent très inégale, à côtés latéraux arrondis, anguleux ou épineux, saillant en avant. Pas d'écusson. Elytres ovalaires, subglobuleuses ou subquadrangulaires, aussi larges à leur base que le prothorax, parfois lisses, parfois sillonnées, granulées, tuberculées ou réticulées. Pattes très robustes, corbeilles des tibias postérieurs caverneuses; tarses linéaires, subcylindriques ou prismatiques, leur quatrième article parfois presque aussi long que les trois premiers; crochets grands, libres et écartés l'un de l'autre. Hanches antérieures et intermédiaires contiguës, les postérieures séparées. Segments intermédiaires de l'abdomen séparés par une suture droite; exceptionnellement le premier et le second séparés l'un de l'autre par une suture droite. Corps apterie, épais, à segments très durs, parfois écailleux.

Je n'ai pu voir en nature *Dyerocera gravida* de Pascoe; d'après un mot que me communique mon collègue G. Marshall, cette espèce rentrerait dans le genre *Brachyrus*.

Ce genre est formé d'un grand nombre d'espèces de facies très différent, alors que les uns n'atteignent pas 10 millimètres de longueur, d'autres ont une taille de près de 5 centimètres et peuvent compter parmi les géants des Curculionides; toutes ces espèces ont un aspect massif et leurs élytres, parfois excessivement dures, ne se laissent que difficilement traverser par l'épingle.

La taille, la forme et la sculpture des téguments, leur coloration varient énormément dans une même espèce. Les dimensions du *Brachycerus junix* peuvent varier entre 6 et 20 millimètres; et, à côté d'un *apterus* de près de 5 centimètres, j'en possède un qui n'atteint guère que 18 millimètres. Dans une même espèce, tels *barbarus* et *undatus*, les côtes des élytres peuvent être très apparentes ou presque effacées. Leur coloration est également fort sujette à varier selon leur état de fraîcheur ou, souvent, elle est cachée par la terre plus ou moins argileuse qui recouvre ces insectes. Schoenherr, dans son *Genera des Curculionides*, Vol. 5, p. 606, a divisé les Brachycerus en trois grands groupes; je reproduis ici cette division en donnant à chacun de ces groupes un nom pouvant servir de point de départ pour un partage de ce grand genre en une série de sous-genres :

TABLE DES SOUS-GENRES

1. *Côtés latéraux du thorax épineux ou en angle aigu* . . . . Subgenus Brachycerus, in species.
   Type : B apterus, *Linné.*
1'. *Côtés latéraux du thorax obtusément anguleux* . . . . . Subgenus Brachycerinus, nov. subg.
   Type : B. dorsalis, *Gyllenhal.*
1''. *Côtés latéraux du thorax arrondis.* . . . . . Subgenus Brachyceromorphus, nov. subg.
   Type : B. tauriculus, *Sparrman* (= inæqualis, *Fabricius*).

Une revision des espèces paléarctiques de ce genre a été faite, par Bedel, dans les *Annales de la Société Entomologique de France*, 5e série, vol. 4, p. 119 à 211 (1874).

Plusieurs espèces de ce genre ont été trouvées à l'état fossile, notamment dans les gypses d'Aix; ces insectes paraîtraient voisins de ceux qui vivent encore actuellement dans ces régions.

Mœurs et Métamorphoses. — Les larves de plusieurs espèces de *Brachycerus* ont été décrites. Celle de *albidentatus*, ainsi que sa nymphe, ont été remarquablement décrites par Perris (*Ann. Soc. Ent. Fr.* (5), Vol. 4, p. 135 [1874]. Voici, en abrégé, ce qu'il en dit :

Œuf. — L'œuf est long de plus de 3 millimètres, largement ellipsoïdal, d'un blanc roussâtre terne et mat. La larve qui en sort pénètre probablement dans le faisceau des feuilles radicales de l'ail ordinaire et descend peu à peu, tout en rongeant pour vivre, jusqu'au bulbe qui peut se trouver à une grande profondeur. Parvenue à ce bulbe, elle s'y introduit et s'y développe rapidement.

Larve. — Longueur 4 centimètres en suivant la courbure dorsale. Apode, très arquée, d'un joli blanc presque mat, avec la tête testacée; parsemée de poils courts et blanchâtres, la plupart inclinés en arrière, un peu plus long sur les côtés et à l'extrémité du corps, plus courts, plus raides et presque spiniformes sur la face ventrale.

Tête testacée, plus foncée sur les côtés et antérieurement, luisante, circulaire, assez convexe, marquée d'un sillon médian depuis le vertex jusque vers le milieu du front, d'où naissent deux traits blanchâtres qui aboutissent aux angles antérieurs. Dans le triangle formé par ces deux traits et le bord antérieur, une dépression marquée de fossettes. Bord antérieur largement échancré dans son ensemble, avec deux petites saillies embrassant la base de l'épistome; celui-ci très transversal, de trois à quatre fois plus large que long, légèrement inégal à sa surface, plus étroit antérieurement qu'à la base. Labre subsemidiscoïdal, déprimé, avec les bords et le milieu plus saillants, de sorte qu'on le dirait creusé de deux larges dépressions. Sur certains individus il paraît antérieurement trilobé et le lobe médian semble se prolonger en un petit groin charnu ou submembraneux. Mandibules noires, à base un peu ferrugineuse; vues en dessus, émoussées à l'extrémité, arrondies extérieurement, très concaves en dedans jusque un peu au delà du milieu de leur longueur, puis droites; vues de côté, subtriangulaires, avec le sommet

arrondi ou bilobé, la tranche inférieure un peu concave, la supérieure convexe ; marquées vers les deux cinquièmes antérieurs d'un fin sillon transversal, en avant duquel sont des rides longitudinales irrégulières ; région basilaire profondément excavée au milieu. Mâchoires très obliquement convergentes, cylindriques, roussâtres, avec l'extrémité blanchâtre et deux ou trois poils en dehors ; leur lobe court, assez large, arrondi, caché souvent derrière la lèvre inférieure, bordé de quelques cils spinuliformes. Palpes maxillaires courts, de deux articles, le premier testacé, avec l'extrémité blanchâtre, bien plus gros et un peu plus long que le second qui est entièrement testacé. Lèvre inférieure charnue, cordiforme, avec une tache testacée sur les côtés et la partie antérieure avancée en languette arrondie, à droite et à gauche de laquelle surgit un palpe labial de deux articles, conformé et coloré comme les palpes maxillaires et à peine plus petit qu'eux. Antennes ordinairement invisibles à cause de leur complète rétractilité, placées près de l'angle supérieur des mandibules et, dans des circonstances favorables, laissant voir deux articles dont le premier sensiblement plus gros que le second qui est grêle Pas la moindre trace d'ocelles.

Corps de douze segments, très épais, très bombé en dessus, plan en dessous, très arqué, de telle sorte que les quatre derniers segments sont, par leur face ventrale, appliqués contre les précédents.

Prothorax plus étroit que tous les autres segments, sauf le dernier et à peine plus long que chacun des deux autres segments thoraciques, deux fois environ plus large que la tête, largement échancré antérieurement, teinté de roussâtre sur la plus grande partie du dos, marqué de deux fossettes près de chaque côté, déprimé et longitudinalement ridé le long du bord postérieur. Mésothorax marqué antérieurement et jusqu'au milieu de sa longueur d'un pli profond arqué en arrière, lequel, avec l'intersection du segment précédent, forme un bourrelet transversal elliptique ; métathorax semblable au mésothorax, mais avec le bourrelet antérieur beaucoup plus transversal.

Abdomen de neuf segments, les sept premiers ayant un bourrelet antérieur transversal comme celui du mésothorax, mais différant de ce segment, indépendamment d'une plus grande longueur, par un pli qui coupe en travers la moitié postérieure du segment et, de chaque côté, un autre pli oblique dessinant un bourrelet latéro-dorsal ; huitième segment marqué simplement d'un pli transversal qui n'atteint pas les côtés ; neuvième segment lisse ou avec un pli transversal à peine visible et dont les extrémités se terminent par une petite fossette, très échancrée postérieurement pour recevoir le mamelon anal qui est petit, presque hémisphérique et marqué d'un pli transversal.

En dessous, tous les segments sont beaucoup plus courts et peu ou point plissés. Le long des flancs abdominaux et jusqu'au huitième segment de l'abdomen inclusivement règne, indépendamment des bourrelets latéraux-dorsaux, un double rang de mamelons très bien marqués.

Stigmates placés au-dessus du rang supérieur de ces mamelons, transversalement elliptiques, à péritrème ferrugineux, au nombre de neuf paires : la première, à peine plus grande et plus inférieure que les autres, sur la ligne qui sépare le prothorax du mésothorax et, à la rigueur, plutôt sur le bord postérieux du prothorax ; les autres au tiers ou au quart antérieur des huit premiers segments abdominaux.

Pattes nulles.

Ces larves ont été trouvées dans les bulbes de l'ail ordinaire. Chaque bulbe n'était occupé que par une seule larve. Cette larve ronge la substance du bulbe et y creuse une cavité assez spacieuse, mais pas beaucoup plus grande pourtant que le volume de son corps. Lorsque le moment de la métamorphose est arrivé, elle perce le bulbe pour en sortir et s'enfonce dans la terre. Là, par les mouvements de son corps et en comprimant la terre autour d'elle, elle se fait une cellule largement ellipsoïdale, dont les parois sont aussi lisses que possible ; mais, tant pour prévenir tout éboulement que pour protéger la nymphe et, plus tard, l'insecte parfait contre toute invasion du dehors et peut-être même contre une humidité excessive, elle prend la précaution d'enduire ces parois d'une gomme insoluble dans l'eau en s'y prenant de la manière suivante : La larve, toujours courbée sur elle-même, émet, par le mamelon

anal, une substance blanche et mucilagineuse; ce mamelon se trouvant fort rapproché de sa bouche, elle s'empare du mucilage à l'aide de ses mandibules et de ses palpes; puis, relevant un peu la tête, elle se met à badigeonner devant elle. Un mouvement de son corps la place ensuite vis-à-vis d'un autre point; une nouvelle gouttelette ne tarde pas à se présenter et l'opération du badigeonnage recommence. Elle continue ainsi jusqu'à ce que les parois de sa cellule soient complètement enduites. Le mucilage est à peu près incolore, mais il a une propriété agglutinative assez puissante, car, en imprégnant la terre sur laquelle la larve l'applique, il forme une coque d'un millimètre environ d'épaisseur et d'une assez grande résistance. Il a de plus, quand il est sec, l'apparence d'un vernis.

Après un intervalle de quatre à huit jours de claustration, la larve, dont la couleur blanche devient de plus en plus mate, se transforme en nymphe.

Nymphe. — Celle-ci n'offre rien de particulier, elle a l'aspect général des nymphes de Curculionidés et présente sur la tête, le prothorax et les élytres les inégalités et les côtés que l'on observe chez l'insecte parfait. Sa couleur, d'abord blanche, devient progressivement roussâtre. Elle est absolument glabre, à part quelques petits poils à la base et à l'extrémité du rostre, sans la moindre spinule, le moindre appendice. La nymphose de cette espèce serait d'environ quinze jours.

A l'état parfait, les Brachycerus sont souvent plus ou moins recouverts de terre, celle-ci étant restée collée à leurs téguments lorsqu'ils sont sortis du sol après leur transformation en imago.

Enfin, on aurait constaté que le *Brachycerus undatus* vit à l'état de larve dans les bulbes des grosses espèces de liliacées, entre autres de l'*allium roseum* et de l'ail comestible, à l'état parfait, il dévore les feuilles de ces plantes; l'*algirus* vit dans les gousses de l'ail comestible et de l'*allium triquetrum*; le *barbarus* habite à l'état de larve les bulbes de *Scilla maritima*, l'insecte parfait se nourrit des feuilles de cette plante dont il ronge les bord; dans la journée, il se tient au pied des herbes ou dans la terre et ne sort que vers le soir; le *pradieri* se trouverait à l'état de larve dans l'*Allium sphaerocephalum*.

Distribution géographique des espèces. — On connaît deux cent nonante-deux espèces de ce genre répandues dans toute l'Afrique, Madagascar, le bassin de la Méditerranée, la France occidentale et, à l'Est, jusqu'au Caucase; dix-neuf de ces espèces appartiennent à la faune paléactique; parmi celles-ci, onze se trouvent en Europe :

1. *B. accola,* Kolbe, Arch. f. Naturg. Vol. 68, p. 241 (1898). — Afrique orientale anglaise.
2. *B. acerbus,* Gyllenhall, in Schoenherr, Gen. Curc. Vol. 5, p. 671 (1840). — Cap de Bonne-Espérance.
3. *B. adustus,* Péringuey, Trans. S. Afr. Philos. Soc. Vol. 6, p. 72 (1892). — Namaqualand, Ovampo-land.
4. *B. aegrotus,* Péringuey, ibidem, Vol. 4, p. 150, pl. 4, f. 8 (1888). — Afrique méridionale.
5. *B. affaber,* Gyllenhal, in Schoenherr, Gen Curc. Vol. 5, p. 641 (1840) — Cap de Bonne-Espérance.
6. *B. albarius,* Gyllenhal, in Schoenherr, ibidem, Vol. 5, p. 683 (1840). — Cafrerie.
   albarius, Imhoff, ibidem, Vol. 2, nº 10 (1846).
7. *B. albicollis,* Pascoe, Trans. Ent. Soc. Lond. p. 13, pl. 2, f. 1 (1887). — Natal.
8. *B. albidentatus,* Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 654 (1840). — Corse, Sardaigne, Sicile.
   albidentatus, Imhoff, ibidem. Vol. 2, nº 15 (1846); Bedel, Nouv. et Faits, p 118 (1872); Ann. Soc. Ent. Fr. (5), Vol. 4, p. 177, pl. 4, f. 1, 2 (1874); Vitale, Riv. Ital. Sc. Nat. Vol 22. p. 11 (1902); Perris, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 125 (1874) (métam.).
9. *B. albofasciatus,* Péringuey, Trans. S. Afr. Philos. Soc. p. 154, pl. 4, f. 9 (1888). — Namaqualand.
10. *B. albotectus,* Péringuey, ibidem, p. 129, pl. 2, f. 5 (1885). — Damaraland.
11. *B. algirus,* Fabricius, Mant. Ins. Vol. 1, p. 120 (1787); Ent. Syst. Vol. 1 (2), p. 382 (1792). — Europe méridionale, Afrique boréale.
    algirus, Thunberg, Nov. Act. Upsal. Vol. 6, p. 26 (1799); Fabricius, Syst. Eleuth. Vol. 2, p. 415 (1801); Latreille, Hist. Nat. Crust. Ins. Vol. 11, p. 92 (1804); Olivier, Ent. Vol. 5 (82), p. 54, pl. 2, f. 19 (1807); Lamarck, Hist. Nat. Anim. s. Vert. Vol. 4, p. 358 (1817); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 416 (1833); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 2, Bull. p. 7, 50 (1872); Nouv. et Faits, p. 119 (1872); Desbro-

chers, Ann. Soc. Ent. Fr. (5), Vol. 2, Bull. p. 85 (1872); Bedel, ibidem (5), Vol. 4, p. 153 (1874); Rey, L'Echange, p. 63 (1894); Vitale, Riv. Ital. Sc. Nat. p. 11, f. 6 (1902).

carinula, Rey, L'Echange, p. 63 (1894).

exemptus, Rey, ibidem, p. 63 (1894).

muricatus, Olivier, Encycl. Méth. Vol. 5, p. 186 (1790); Herbst, Käf. Vol. 7, p. 97, pl. 101, f. 8 (1797); Latreille, Gen. Crust. Ins. Vol. 2, p. 253 (1807); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 154 (1874).

perodiosus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 661 (1833).

semiaeneus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 365 (1871).

var. attenuatus, Vitale, Riv. Coleott. Ital. p. 42 (1903). — Sicile.

var. cirrosus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 660 (1833); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 154 (1874); Vitale, Riv. Ital. Sc. Nat. Vol. 22, p. 12 (1902). — Sicile.

var. planinostris, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 417 (1833); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 153 (1874). — Italie.

var sulcifrons, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 420 (1833); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 154 (1874). — France méridionale.

12. *B. amabilis*, Péringuey, Trans. S. Afr. Philos. Soc. p. 152 (1888). — Namaqualand.

13. *B. ambulans*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 65 (1871). — Cafrerie.

14. *B. anaglypticus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 679 (1840). — **Pl. 2, Fig. 9.** — Cafrerie, Cap de Bonne-Espérance.

var. nodiferus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 679 (1840). — Cap de Bonne-Espérance.

var. sparsipes, Gyllenhal, in Schoenherr, ibidem, p. 679 (1840). — Cap de Bonne-Esp., Cafrerie.

15. *B. annulatus*, Gerstäcker, Monatsbl. Berl. Akad. Wiss. p. 83 (1885); Peters Reise Mossamb. p. 305, pl. 18, f. 6, (1862). — Mozambique, Zanzibar.

annulatus, Quedenfeldt, Berl. Ent. Zeitschr. Vol. 32, p. 284 (1888).

var. maculicollis, Péringuey, Ann. Mag. Nat. Hist. p. 22 (1888). — Natal.

16. *B. apicatus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 637 (1840). — Cap de Bonne-Espérance.

stellaris, Gyllenhal, in Schoenherr, ibidem, Vol. 1, p. 424 (1833).

var. cirriferus, Gyllenhal, in Schoenherr, ibidem, Vol. 5, p. 637 (1840). — Cap de Bonne-Espérance.

17. *B. apterus*, Linné, Syst. Nat. (ed. 10), p. 386 (1758). — **Pl. 2, Fig. 7.** — Cafrerie, Cap de Bonne-Esp.

apterus, Fabricius, Syst. p. 142 (1775); Spec. Ins. p. 176 (1781); Sparrman, Act. Holm. p. 54, pl. 3, f. 31 (1785); Fabricius, Mant. Ins. Vol. 1, p. 121 (1787); Olivier, Encycl. Méth. Vol. 5, p. 183 (1790); Fabricius, Ent. Syst. Vol. 1 (2), p. 379 (1792); Panzer, Ed. Voet. Vol. 4, p. 41, pl. 33, f. *a* (1798); Fabricius, Syst. Eleuth. Vol. 2, p. 412 (1801); Olivier, Ent. Vol. 5 (82), p. 44, pl. 1, f. 3 (1807); Lamarck, Hist. Nat. Anim. s. Vert. Vol. 4, p. 358 (1817); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 386 (1833); Gyllenhal, ibidem, Vol. 5, p. 606 (1840); Imhoff, Gen. Curc. Vol. 2, nº 13 (1846); Gerstäcker, Peters Reise Mossamb. p. 305 (1862); Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 42 (1871).

cruciatus, De Geer, Mém Ins. Vol. 5, p. 275, pl. 16, f. 1 (1775).

var. caffer, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 1, p. 394 (1833); Vol. 5, p. 607 (1840). — Cafrerie, Cap de Bonne-Esp., Sierra Leone.

var. ferrugineus, Olivier, Ent. Vol. 5 (82), p. 45 pl. 3, f. 28 (1807); Gyllenhall, in Schönherr, Gen. Curc. Vol. 1, p. 389 (1833); Vol. 5, p. 606 (1840); Alluaud, in Grandidier, Hist. Nat. Madag. p. 405 (1900). — Cap de Bonne-Esp., Madagascar.

var. tessellatus, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 1, p. 388 (1833); Vol. 5, p. 606 (1840); Faust, Ann. Soc. Ent. Belg. Vol. 43, p. 401 (1899). — Cap de Bonne-Esp., Congo.

var. apterus, Thunberg, Nov. Act. Upsal. Vol. 6, p. 17 (1799).

18. *B. atrox*, Gerstäcker, Wiegm. Arch. f. Naturg. Vol. 1, p. 72 (1871); Deckens Reise Mossamb. Vol. 3 (2), pl. 11, f. 10 (1873). — Zanzibar, Congo.

atrox, Duvivier, Ann. Soc. Ent. Belg. Vol. 36, p. 311 (1892).

19. *B. auguris*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 50 (1871). — Cafrerie.

augurius, Pape, Deutsche Ent. Zeitschr. p. 119 (1907). — [qualand.

20. *B. auritus*, Péringuey, Trans. S. Afric. Philos. Soc. p. 151, pl. 4, f. 3 (1881). — Cap de Bonne-Esp., Nama-

21. *B. axillaris*, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 5, p. 715 (1840). — Cap de Bonne-Espérance.

22. *B. baccatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 65 (1871). — Cafrerie.

23. *B. balearicus*, Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 151, pl. 4, f. 3, 17 (1874). — Baléares.

24. *B. barbarus*, Linné, Syst. Nat. (ed. 10), p. 386 (1758); (ed. 12), p. 617 (1767) (première partie de la description). — Europe méridionale, Afrique boréale.

barbarus, Syst. Ent. p. 120 (1775); Spec. Ins. p. 194 (1781); Mant. Ins. p. 120 (1787); Olivier, Encycl. Méth. Vol. 5, p. 185 (1790); Fabricius, Ent. Syst. Vol. 1 (2), p. 381 (1792); Herbst, Käf. Vol. 7, p. 80 (1797); Fabricius, Syst. Eleuth. Vol. 2, p. 414 (1801); Olivier, Ent. Vol. 5 (82), p. 49, pl. 2, f. 15 (1807); Reiche, Ann. Soc. Ent. Fr. (3), Vol. 5, p. 661 (1857); Bedel, ibidem (5), Vol. 4, p. 183 (1874); Lucas, ibidem (6), Vol. 4, Bull. p. 56 (1884); Vitale, Riv. Ital. Sc. Nat. Vol. 22, p. 11 (1902).

interruptus, Rey, L'Echange, p. 63 (1894).

paradoxus, Rey, ibidem, p. 64 (1894).

var. lateralis, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 407 (1833); Vol. 5, p. 653 (1840); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 183 (1874). — Espagne, Portugal.

var. algirus, Latreille, Gen. Crust. Ins. Vol. 2, p. 253 (1807).

var. fluctiger, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 651 (1840).

var. latro, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 1, p. 412 (1833); Vol. 5, p. 656 (1840); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 183 (1874). — Europe méridionale, Afrique boréale.

var. curtulus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 366 (1871).

var. libertinus, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 650 (1840).

var. ramosus, Schaufuss, Nunq. Otios, Vol. 3, p. 542 (1882). — Baléares.

25. *B. batrachus*, Gestro, Ann. Mus. Stor. Nat. Genova, Vol. 35, p. 405 (1895). — Gallaland.

26. *B. bicallosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 613 (1840). — Cafrerie.

27. *B. bicornutus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 66 (1871). — Cafrerie.

28. *B. biglobatus*, Sparrmann, Act. Holm. p. 53, pl. 3, f. 30 (1785). — Cap de Bonne-Espérance.

biglobatus, Olivier, Encycl. Méth. Vol. 5, p. 569 (1790); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 432 (1833); Vol. 5, p. 696 (1840).

spectrum, Thunberg, Nov. Act. Upsal. Vol. 6, p. 35 (1799).

var. interpunctatus, Gyllenhal, in Schoenherr, Gen. Curc. Vol 5, p. 697 (1840). — Cafrerie.

var. lentus, Gyllenhal, in Schoenherr, ibidem, p. 696 (1840). — Cap de Bonne-Espérance.

var. saxosus, Gyllenhal, in Schoenherr, ibidem, p. 697 (1840). — Cap de Bonne-Espérance.

var. scrobirostris, Gyllenhal, in Schoenherr, ibidem, p. 697 (1840). — Cafrerie.

var. ungulatus, Gyllenhal, in Schoenherr, ibidem, p. 697 (1840). — Cap de Bonne-Espérance.

29. *B. boschimanus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 160 (1888). — Cap de Bonne-Espérance.

30. *B. bottegi*, Gestro, Ann. Mus. Stor. Nat. Genova, Vol. 35, p. 406 (1895). — Gallaland.

31. *B. brachyceropsides*, Péringuey, Ann. Mag. Nat. Hist. p. 222 (1888). — Natal.

32. *B. brevicostatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 48 (1871). — Cafrerie.

var. cinnamomeus, Pascoe, Trans. Ent. Soc. Lond. p. 8, pl. 1, f. 1 (1887); Proc. Ent. Soc. Lond. p. 25 (1888); Marshall, Deutsche Ent. Zeitschr. p. 481 (1907). — Mozambique, Zanzibar.

33. *B. buculus*, Schoenherr, Gen. Curc. Vol. 1, p. 427 (1833). — Cap de Bonne-Espérance.

juvencus, Thunberg, Nov. Act. Upsal. Vol. 6, p. 22 (1799).

34. *B. callosus*, Schoenherr, Gen. Curc. Vol. 1, p. 427 (1833). — Espagne, Portugal, Maroc, Algérie, Tunisie.

callosus, Fåraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 657 (1840); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 187 (1874); (5), Vol. 7, p. 200 (1887).

algirus, Lucas, Hist. Nat. Algérie, p. 414 (1849).

chevrolati, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 657 (1840); Bedel, Nouv. et Faits, p. 118 (1872); Ann. Soc. Ent. Fr. (5), Vol. 4, p. 187, pl. 4, f. 9 (1874); (5), Vol. 7, p. 200 (1887); Vitale, Riv. Ital. Sc. Nat. Vol. 22, p. 10, f. 3 (1902).

hypocritus, Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 190, pl. 4, f. 5 (1874); Fauvel, Rev. Ent. Caen, p. 81 (1884).

parens, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 366 (1871).

peninsularis, Chevrolat, Rev. Zool. p. 105 (1866),

raffrayi, Desbrochers, Mitth. Schweiz. Ent. Ges p. 365 (1871).

semituberculatus, Lucas, Explor. Algérie, p. 411, pl. 35, f. 6 (1849).

variolosus, Thunberg, Nov. Act. Upsal. Vol. 6, p. 30 (1799).

35. *B. canalirostris*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 62 (1871). — Cafrerie.

36. *B. cancellatus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 404 (1833); Vol, 5, p. 615 (1840). — Cafrerie, Cap de B.-Espér.
cancellatus, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p 46 (1871).

37. *B. caperans*, Lichtenstein. Cat. Mus. Hamb. p. 55 (1795). — Cap de Bonne-Espérance.
caperans, Herbst, Käf. Vol. 7, p. 88 (1797).

38. *B. carbunculus*, Quedenfeldt, Berl. Ent. Zeitschr. Vol. 32, p. 287 (1888). — Afrique centrale.

39. *B. catenulatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol, 28, p. 64 (1871). — Cafrerie.

40. *B. caviceps*, Péringuey, Trans. S. Afr. Philos. Soc. p. 149, pl. 4, f. 2 (1888). — Cap de B.-E., Namaqualand

41. *B. cincticollis*. Quedenfeldt, Berl. Ent. Zeitschr. Vol. 32, p. 285 (1888). — Afrique centrale.

42. *B. cinctipes*. Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 397 (1833). — Cap de Bonne-Espérance.

43. *B. cinerarius*, Wiedeman, Zool. Mag. Vol. 2, p. 115 (1801). — Cap de Bonne-Espérance.
cinerarius, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 426 (1833); Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 664 (1840).
var. spilopterus, Wiedemann, Zool. Mag. Vol. 2 (1), p. 117 (1801) (1); Schoenherr, Gen. Curc. Vol. 1, p. 440 (1833); Vol. 5, p. 720 (1840). — Cap de Bonne-Espérance.

44. *B. cinereus*, Olivier, Ent. Vol. 5 (82), p. 56, pl. 3, f. 35 (1807). — Egypte.
cinereus, Bedel, Ann. Soc. Ent. Fr. (5), Vol. 2, Bull. p. 50 (1872); (5), Vol. 4, p. 156 (1874); Vitale, Riv. Ital. Sc. Nat. Vol. 22, p. 11, f. 5 (1902).
pulverulentus, Olivier, Ent. Vol. 5 (82), p. 56, pl. 2, f. 29 (1807).
var. lutosus, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 1, p. 417 (1833); Rey, L'Echange, p. 63 (1894); Vitale, Riv. Ital. Sc. Nat. Vol. 22, p. 12 (1902). — France méridionale, Italie, Illyrie, Hongrie, Grèce, Turquie, Russie méridionale.
var. superciliosus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 422 (1833); Falderman, Fauna Transcasp. Vol. 2, p. 167, pl. 5, f. 8 (1837).
var. quadrisulcatus. Fischer, Bull. Soc. Nat. Moscou, p. 95 (1830). — Caucase.

45. *B. clitellatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 56 (1871). — Cafrerie.

46. *B. collaris*, Fåhraeus, ibidem, p. 61 (1871). — Cafrerie.

47. *B. comparabilis*, Kolbe, Arch. f. Naturg. Vol. 64, p. 243 (1898). — Uzambara.

48. *B. comtus*, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 663 (1840). — Cap de Bonne-Espérance.

49. *B. congestus*, Gerstäcker, Monatsbl. Berl. Akad. Wiss. p. 83 (1855); Peters Reise, p. 306, pl. 18, f. 7 (1862). — Mozambique, Cafrerie.
congestus, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 45 (1871).

50. *B. consimilis*, Péringuey, Trans. S. Afr. Philos. Soc. p. 133, pl. 3, f. 2 (1885). — Namaqualand, Cap de Bnne-Espérance.

51. *B. contortus*, Fåhraeus, Oefv. Vet.-Akad. Vol. 28, p. 57 (1871). — Cafrerie.

52. *B. cordiger*, Sparrman, Act. Holm. p. 50. pl. 3, f. 23 (1785). — **Pl. 2, Fig. 8.** — Cap de Bonne-Espérance.
cordiger, Olivier. Encycl. Méth. Vol. 5, p. 568 (1790); Fabricius, Syst. Eleuth. Vol. 2, p. 413 (1801); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 395 (1833); Vol. 5, p. 613 (1840).
papillosus, Thunberg, Nov. Acta. Upsal. Vol. 6, p. 20 (1799).
scabrosus, Olivier, Encycl. Méth. Vol. 5, p. 184 (1790); Ent. Vol. 5 (82), p. 48, pl. 2, f. 11 (1807).

53. *B. corniculatus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 429, (1833); Vol. 5, p. 686 (1840). — Cafrerie.

54. *B cornutns*, Linné, Mus. Lud. Ulr. p. 57 (1764). — **Pl. 2, Fig. 4.** — Cap de B.-E., Damaraland.
cornutus, Fabricius, Syst. Ent. p. 153 (1775); Spec. Ins. p. 195 (1781); Sparrman, Act. Holm. p. 51, pl. 3, f. 23 (1785); Fabricius, Mant. Ins. Vol. 1, p. 120 (1787); Ent. Syst. Vol. 1 (2), p. 322 (1792); Herbst, Käf. Vol. 7, p. 90 (1797); Thunberg, Nov. Act. Upsal. Vol. 6, p. 20 (1799); Fabricius, Syst. Eleuth. Vol. 2, p. 415 (1801); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 399 (1833); Vol. 5, p. 643 (1840); Imhoff, Gen. Curc. Vol. 2, nº 11 (1846).
rixator, Pascoe, Trans. Ent. Soc. Lond. p. 11, pl. 1, f. 7 (1887).
spinirostris, Olivier, Encycl. Méth. Vol. 5, p. 183 (1790); Ent. Vol. 5 (82), p. 59, pl. 3, f. 24 (1807); Herbst, Käf. Vol. 7, p. 93 (1797).

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(1) Considéré jusqu'à présent comme formant une espèce distincte, le *spilopterus* m'a été indiqué par G. Marshall comme n'étant, d'après l'étude des types, qu'une variété du *cinerarius*.

55. *B. coronirostris*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 627 (1840). — Cap de Bonne-Espérance.
56. *B. costalis*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 616 (1840). — Cap de B.-E., Sierra Léone.
57. *B. costatus*, Gyllenhal, in Schoenherr, ibidem, p. 687 (1840). — Cap de Bonne-Espérance.
58. *B. crenatus*, Olivier, Encycl. Méth. Vol. 5, p. 186 (1790). — Madagascar.
    crenatus, Herbst, Käf. Vol. 7, p. 96 (1797); Olivier, Ent. Vol. 5 (82), p. 66, pl. 2, f. 17 (1807); Schoenherr, Gen. Curc. Vol. 5, p. 707 (1840); Alluaud, in Grandidier, Hist. Nat. Madag. p. 405 (1900).
59. *B. crispatirostris*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 689 (1840). — Cap de Bonne-Espérance.
60. *B. crispatus*, Fabricius, Mant. Ins. Vol. 1, p. 120 (1787); Ent. Syst. Vol. 1 (2), p. 382 (1792). — Algérie, Tunisie
    crispatus, Herbst, Käf. Vol. 7, p. 86 (1797); Thunberg, Nov. Act. Upsal. Vol. 6, p. 29 (1799); Fabricius, Syst. Eleuth. Vol. 2, p. 414 (1801); Olivier, Ent. Vol. 5 (82), p. 54, pl. 3, f. 27 (1807); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 180 (1874).
    clathratus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 362 (1871).
    pterygomalis, Lucas, Explor. Algérie, Vol. 2, p. 411 (1849).
    rectecostatus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 362 (1871).
61. *B. crispicularis*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 690 (1840). — Cap de Bonne-Espérance.
62. *B. cristatus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 134, pl. 2, f. 7 (1885). — Cafrerie, Namaqualand.
63. *B. curruca*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 677 (1840). — Cap de B.-E., Cafrerie.
    curruca, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 55 (1871).
64. *B. cylindripes*, Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 171, pl. 4, f. 4 (1874). — Maroc.
65. *B. deceptor*, Péringuey, Trans. S. Afr. Philos. Soc. p. 163 (1888). — Cap de Bonne-Espérance.
66. *B. densegranosus*, Fairmaire, Ann. Soc. Ent. Fr. (6), Vol. 7, p. 320, pl. 3, f. 8 (1887). — Afrique orientale.
67. *B. detritus*, Thunberg, Nov. Act. Upsal. Vol. 6, p. 21 (1799). — Cap de Bonne-Espérance.
    detritus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 403 (1833); Fåhraeus, in Schoenherr, ibidem, Vol. 5, p. 612 (1840).
    var. hottentotus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 393 (1833); Fåhraeus, in Schoenherr, ibidem, Vol. 5, p. 612 (1840). — Cap de Bonne-Espérance.
    var. horoquanus, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 612 (1840). — Cap de Bonne-Espérance.
    var. maculatus, Fabricius, Syst. Eleuth. Vol. 2, p. 413 (1801); Schoenherr, Gen. Curc. Vol. 1, p. 395 (1833); Fåhraeus, in Schoenherr, ibidem, Vol. 5, p. 611 (1840). — Cap de Bonne-Espérance.
    var. maculosus, Kirby, Trans. Linn. Soc. Lond. p. 429 (1818); Schoenherr, Gen. Curc. Vol. 1, p. 399 (1833); Vol. 5, p. 669 (1840). — Cap de Bonne-Espérance.
68. *B. discolor*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 647 (1840). — Cap de Bonne-Espérance.
69. *B. disjunctus*, Pascoe, Journ. Linn. Soc. Lond. Vol. 12, p. 10, pl. 1, f. 3 (1873). — Damaraland.
70. *B. dispar*, Péringuey, Trans. S. Afr. Philos. Soc. p. 158 (1888). — Namaqualand.
71. *B. dorsalis*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 425 (1833); Vol. 5, p. 677 (1840). — Cap de Bonne-Espérance.
72. *B. dorsomaculatus*, Quedenfeldt, Berl. Ent. Zeitschr. Vol. 32, p. 193 (1888). — Afrique centrale.
73. *B. dubius*, Panzer, Ed. Voet, Vol. 4, p. 42, pl. 34, f. E (1798). — Patrie (?).
    minor, Voet, Cat. Vol. 2, Index, p. 16 (1806).
74. *B. duplicatus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 638 (1840). — Cafrerie.
    duplicatus, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 51 (1871).
    var. boei, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 639 (1840). — Cafrerie.
75. *B. ebullinus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 157 (1888). — Cap de Bonne-Espérance.
76. *B. echinatus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 402 (1833); Vol. 5, p. 645 (1840). — Cap de Bonne-Espérance.
77. *B. eckloni*, Gyllenhall, in Schoenherr, ibidem, Vol. 5, p. 694 (1840). — Cafrerie, Cap de B.-E.
    longiusculus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 695 (1840); Marshall, Deutsche Ent. Zeitschr. p. 481 (1907).
    suturalis, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 694 (1840); Pascoe, Trans. Ent. Soc. Lond. p. 9, pl. 1, f. 2 (1887); Proc. Ent. Soc. Lond. p. 25 (1888).

78. *H. effertus*, Péringuey, Trans. Ent. Soc. Lond. p. 188 (1886). Zambèze.

79. *H. emeritus*, Linné, Mus. Lud. Ulr. p. 56 (1764). Cap de Bonne-Espérance.
emeritus, Thunberg, Nov. Act. Upsal. Vol. 6, p. 59 (1799); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 617 (1840).

80. *H. ephippiatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 56 (1871). Cafrerie.

81. *H. erinaceus*, Olivier, Ent. Vol. 5 (82), p. 53, pl. 3, f. 25 (1807). Cap de Bonne-Espérance.
erinaceus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 400 (1833); Vol. 5, p. 644 (1840).

82. *H. erosus*, Gerstäcker, Monatsbl. Berl. Akad. Wiss. p. 83 (1855); Peters' Reise Mossamb. p. 306 (1862). Mozambique.

83. *H. errans*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 66 (1871). Cafrerie.

84. *H. eximius*, Pascoe, Trans. Ent. Soc. Lond. p. 9, pl. 1, f. 3 (1887). Cap de Bonne-Espérance.

85. *H. farctatus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 618 (1840). Cap de Bonne-Espérance.

86. *H. fahraei*, Fåhraeus, in Schoenherr, ibidem, p. 718 (1840). Cap de Bonne-Espérance.

87. *H. farctus*, Illiger, in Schneider, N. Mag. f. Liebhäber d. Ent. Heft 5, p. 617 (1794). Cap de Bonne-Espérance.
farctus, Herbst, Käf. Vol. 7, p. 98 (1797).

88. *H. fasciolaris*, Olivier, Ent. Vol. 5 (82), p. 64, pl. 3, f. 31 (1807). Cap de Bonne-Espérance.
fasciolaris, Schoenherr, Gen. Curc. Vol. 1, p. 438 (1833); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 645 (1840).

89. *H. fasciolaris*, Panzer, Voets Beschr. u. Abbild. hartschaal. Ins. Coleopt. Theil 4, p. 42, pl. 34, f. C (1798). Cap de Bonne-Espérance.
cafrenus, Voet, Cat. Vol. 2, Index, p. 16 (1806).

90. *H. fasciculosus*, Germar, in Schoenherr, Gen. Curc. Vol. 1, p. 425 (1833). Cap de Bonne-Espérance.
fasciculosus, Fåhraeus, in Schoenherr, ibidem, Vol. 5, p. 634 (1840).

91. *H. feron*, Fairmaire, Ann. Soc. Ent. Fr. (6), Vol. 7, p. 320 (1887). Afrique orientale.

92. *H. ferrugatus*, Quedenfeldt, Berl. Ent. Zeitschr. Vol. 32, p. 286 (1888). Afrique centrale.

93. *H. fischeri*, Kolbe, Arch. f. Naturg. Vol. 64, p. 244 (1898). Uzambara.

94. *H. flavonotatus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 147, pl. 4, f. 8 (1888). Cap de Bonne-Espérance.

95. *H. formidulosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 620 (1840). Cap de Bonne-Espérance.

96. *H. foveifrons*, Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 194, pl. 4, f. 6, 15 (1874). Syrie.

97. *H. foveolatus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 160 (1888). Cap de Bonne-Espérance.

98. *H. fuligimosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 712 (1840). Cap de Bonne-Espérance, Cafrerie.
fuligimosus, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 66 (1871).

99. *H. gemmatus*, Olivier, Encycl. Méth. Vol. 5, p. 185 (1790); Ent. Vol. 5, (82), p. 62, pl. 2, f. 13 (1807). Afrique.

100. *H. gemmeus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 704 (1840). Cap de Bonne-Espérance.

101. *H. gemmifer*, Germar, in Schoenherr, ibidem, Vol. 1, p. 304 (1833). Cap de Bonne-Espérance.
gemmifer, Fåhraeus, in Schoenherr, ibidem, Vol. 5, p. 680 (1840).

102. *H. glabratus*, Wiedemann, in Germar, Mag. f. Ent. Vol. 4, p. 157 (1821). Cap de Bonne-Espérance.
glabratus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 437 (1833); Vol. 5, p. 710 (1840).
oblitus, Sturm, Cat. p. 188 (1826).

103. *H. glandulifer*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 667 (1840). Cap de Bonne-Espérance.

104. *H. globiferus*, Thunberg, Nov. Act. Upsal. Vol. 6, p. 21 (1799). Cap de Bonne-Espérance.
globiferus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 403 (1833); Vol. 5, p. 641 (1840).
var. *bullatus*, Gyllenhal, in Schoenherr, ibidem, Vol. 1, p. 396 (1833); ibidem, Vol. 5, p. 641 (1840). Cap de Bonne-Espérance.

105. *H. globosus*, Drury, Illustr. Nat. Hist. Vol. 1, p. 69, pl. 32, f. 4 (1770); Vol. 2, Index (1773). Cap de Bonne-Espérance.
globosus, Sparrman, Act. Holm. p. 54 (1785); Olivier, Encycl. Méth. Vol. 5, p. 184 (1790); Fabricius, Ent. Syst. Vol. 1 (2), p. 381 (1792); Herbst, Käf. Vol. 7, p. 85, pl. 101, f. 1 (1797); Thunberg, Nov. Act. Upsal. Vol. 6, p. 18 (1799); Fabricius, Syst. Eleuth. Vol. 2, p. 413 (1801);

Olivier, Ent. Vol. 5 (82), p. 47, pl. 2 f. 10 (1807); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 302 (1833); Fåhraeus, in Schoenherr, ibidem, Vol. 5, p. 610 (1840).

106. *B. granicollis*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 710 (1840). Cap de Bonne-Espérance.
107. *B. graniferus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 43 (1871). Cafrerie.
108. *B. granirostris*, Fåhraeus, ibidem, p. 62 (1871). Cafrerie.
109. *B. granosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 387 (1833). Cafrerie, Transvaal.

granosus, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 607 (1840); Oefv. Vet.-Akad. Förh. Vol. 28, p. 43 (1871); Hartmann, Deutsche Ent. Zeitschr. p. 65 (1906).

apterus, Herbst, Kät. Vol. 7, p. 75, pl. 101, f. 1 (1797); Faust, Ann. Soc. Ent. Belg. Vol. 43, p. 401 (1899).

? ornatus, Drury, Illustr. Nat. Hist. Vol. 2, p. 63, pl. 34, f. 3 (1773).

110. *B. gravidus*, Pascoe, Trans. Ent. Soc. p. 334, pl. 11, f. 9 (1887). Transvaal.
111. *B. gravis*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 46 (1871). Cafrerie.
112. *B. griseus*, Fabricius, Syst. Eleuth. Vol. 2, p. 415 (1801). Cap de Bonne-Espérance.

griseus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 433; Vol. 5, p. 714 (1840).

113. *B. gryphus*, Pascoe, Trans. Ent. Soc. Lond. p. 16, pl. 2, f. 7 (1887). Uzambara.
114. *B. guineensis*, Péringuey, Stett. Ent. Zeit. Vol. 48, p. 407 (1887). Guinée.
115. *B. gyllenhali*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 614 (1840). Cap de Bonne-Espérance.
116. *B. haedus*, Gyllenhal, in Schoenherr, ibidem, Vol. 1, p. 401 (1833); Vol. 5, p. 644 (1840). Cap de Bonne-Espérance.
117. *B. hoffmanni*, Faust, Ann. Soc. Ent. Belg. Vol. 40, p. 72 (1896). — **Pl. 2, Fig. 10.** Afrique orientale.
118. *B. honorabilis*, Brancsik, Jahr. Naturw. Ver. Trencsen, Vol. 19, p. 122, pl. 4, f. 14 (1897). Zambèze.
119. *B. humeralis*, Péringuey, Trans. S. Afr. Philos. Soc. p. 151 (1888). Namaqualand.
120. *B. hybridus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 58 (1871). Cafrerie.
121. *B. hypocritus*, Fåhraeus, ibidem, p. 59 (1871). Cafrerie.
122. *B. hystrix*, Schoenherr, Gen. Curc. Vol. 1, p. 399 (1833); Vol. 5, p. 644, (1840). Cap de Bonne-Espérance.

cornutus, Olivier, Encycl. Méth. Vol. 5, p. 183 (1790); Ent. Vol. 5 (82), p. 53, pl. 2, f. 14 (1807); Gyllenhall, in Schoenherr, Gen. Curc. Vol. 1, p. 399 (1833); Lacordaire, Gen. Col. Vol. 6, p. 286, note 1 (1863).

frontalis, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 619 (1840); Marshall, Proc. Zool. Soc. Lond. p. 957 (1906).

123. *B. ignavus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 44 (1871). Cafrerie.
124. *B. impendens*, Fåhraeus, ibidem, p. 47 (1871). Cafrerie.
125. *B. impius*, Fåhraeus, ibidem, p. 46 (1871). Cafrerie.
126. *B. impressicollis*, Péringuey, Trans. S. Afr. Philos. Soc. p. 130, pl. 2, f. 1 (1885). Cap de Bonne-Espérance, Transvaal, Natal.

draco, Pascoe, Trans. Ent. Soc. Lond. p. 15, pl. 2, f. 4 (1887).

127. *B. impressifrons*, Gyllenhall, in Schoenherr, Gen. Curc. Vol. 5, p. 631 (1840). Cafrerie.
128. *B. imprudens*, Gyllenhall, in Schoenherr, ibidem, p. 670 (1840). Cap de Bonne-Espérance.
129. *B. inaequalis*, Thunberg, Nov. Act. Upsal. Vol. 6, p. 27 (1799). Cap de Bonne-Espérance

inaequalis, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 648 (1840).

thunbergi, Gyllenhal, in Schoenherr, ibidem, p. 648 (1840).

130. *B. incommodus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 72 (1892). Ovampoland.
131. *B. indutus*, Péringuey, Trans. Ent. Soc. Lond. p. 187 (1896). Cap de Bonne-Espérance.
132. *B. ingratus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 50 (1871). Cafrerie.
133. *B. inops*, Péringuey, Trans. S. Afr. Philos. Soc. p. 161 (1888). Cap de Bonne-Espérance.
134. *B. inordinatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 54 (1871). Cafrerie.
135. *B. intermedius*, Péringuey, Trans. S. Afr. Philos. Soc. p. 127 (1885). Transvaal.
136. *B. interpositus*, Hartmann, Deutsche Ent. Zeitschr. p. 66 (1906). Transvaal.
137. *B. interstitialis*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 59 (1871). Cafrerie.

138. *B. intulus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 658 (1840). — Cap de Bonne-Espérance.

139. *B. inurbanus*, Gyllenhal, in Schoenherr, ibidem, p. 626 (1840). — Cap de Bonne-Espérance.

140. *B. ixodicoides*, Péringuey, Trans. S Afr Philos. Soc. p. 162 (1888). — Cap de Bonne-Espérance.

141. *B. junix*, Lichtenstein, Cat. Mus. Zool. Hamb. Vol. 3, p. 55 (1796). — Dalmatie, Hongrie, Grèce.

junix, Herbst, Käf. Vol. 7, p. 88 (1797); Brullé, Exp. éd. Morée, p. 236 (1832); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 195 (1874); Kraatz, Deutsche Ent. Zeitschr. p. 421 (1875); Rey, L'Echange, p. 63 (1894); Vitale, Riv. Ital. Sc. Nat. Vol. 22, p. 12, f. 7 (1902).

var. aegyptiacus, Olivier, Ent. Vol. 5, (82), p. 51, pl. 3, f. 34 (1807); Kraatz, Berl. Ent. Zeitschr. p. 233 (1864); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 198 (1874). — Sicile, Grèce, Asie mineure, Syrie, Egypte.

argillaceus, Reiche, Ann. Soc. Ent. Fr. (3), Vol. 5, p. 654 (1857).

insularis, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 367 (1871).

nodulosus, Reiche, Ann. Soc. Ent Fr. (3), Vol. 5, p. 658 (1857).

olivieri, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 367 (1871).

ornatus, Reiche, Ann. Soc. Ent. Fr. (3), Vol. 5, p. 658 (1857).

siculus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 414 (1833).

var. cribrarius, Olivier, Ent. Vol. 5 (82), p. 58, pl. 3, f. 33 (1807); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 202 (1874). — Caucase, Mésopotamie, Syrie.

fimbriatus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 365 (1871).

var. lutulentus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 418 (1833); Vol. 5, p. 657 (1840). — Europe méridionale orientale.

difformis, Faldermann, Nouv. Mém. Soc. Nat. Moscou, Vol 6, p. 16 (1837).

incertus, Desbrochers, Mitth Schweiz. Ent. Ges. p. 367 (1871).

var. orbipennis, Reiche, Ann. Soc. Ent. Fr (3), Vol. 5, p. 656 (1857); Bedel, ibidem, (5), Vol. 4, p. 200 (1874). — Syrie.

var. sinuatus, Olivier, Ent. Vol. 5 (82), p. 58, pl. 3, f. 26 (1807); Kiesenwetter, Berl. Ent. Zeitschr. p. 264 (1864); Kraatz, ibidem, p. 233 (1864); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 202 (1874). — Europe méridionale orientale, Asie mineure.

besseri, Krynicky, Bull. Soc. Nat. Moscou, Vol. 5, p. 145 (1832); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 413 (1833); Faldermann, Fauna Transcauc. p. 165, pl. 5 (1857); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 656 (1840); Imhoff, Gen. Curc. Vol. 2, nº 15 (1846).

? pisifer, Thunberg, Nov. Act. Upsal. Vol. 6, p. 23 (1799).

pisifer, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 656 (1840).

tauricus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 368 (1871); Kraatz, Deutsche Ent. Zeitschr. p. 422 (1875).

142. *B. juvencus*, Sparrman, Act. Holm. p. 51, pl. 3, f. 26 (1785). — Cap de Bonne-Espérance.

143. *B. kabylianus*, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 364 (1871). — Algérie, Tunisie.

kabylianus, Bedel, Ann, Soc. Ent. Fr. (5), Vol. 4, p. 169 (1874).

velutinus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 364 (1871).

144. *B. karooensis*, Péringuey, Trans. S. Afr. Philos. Soc. p. 153 (1888). — Cap de Bonne-Espérance.

145. *B. kumbanensis*, Quedenfeldt, Berl. Ent. Zeitschr. p. 192, 284 (1888). — Afrique centrale.

— Pl. 2, Fig. 2.

kumbanensis, Faust, Ann. Soc. Ent. Belg. Vol. 43, p. 402 (1899).

146. *B. labrusca*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 672 (1840). — Cap de Bonne-Espérance.

uva, Thunberg, Nov. Act. Upsal. Vol. 6, p. 23 (1799).

147. *B. lacordairei*, Faust, Ann. Soc. Ent. Belg. Vol. 43, p. 401 (1899). — Congo.

148. *B. laevifrons*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 58 (1871). — Cafrerie.

149. *B. lafertei*, Péringuey, Ann. Soc. Ent. Belg. Vol. 32, Bull. p. 78 (1888). — Madagascar.

150. *B. lateritius*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 685 (1840). — Cap de Bonne-Espérance.

151. *B. latifrons*, Gyllenhal, in Schoenherr, ibidem, p. 632 (1840). — Cap de Bonne-Espérance.

152. *B. levidipus*, Gyllenhal, in Schoenherr, ibidem, p. 700 (1840). — Cap de Bonne-Espérance.

153. *B. lividicollis*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 57 (1871). — Cafrerie.

154. *B. lobaticollis*, Péringuey, Trans. S. Afr. Philos. Soc. p. 131, pl. 2, f. 2, (1885). — Damaraland.

155. *B. longirostris*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 692 (1840). — Cap de Bonne-Espérance.

156. *B. longulus*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 37, p. 34 (1893). — Choa.

157. *B. loquax*, Hartmann, Deutsche Ent. Zeitschr. p. 66 (1906). — Transvaal.

158. *B. luridus*, Fåhraeus, Oefv. Vet.-Akad. Förh Vol. 28, p. 44 (1871). Cafrerie.

159. *B. luteus*, Wiedemann, Zool. Mag. Vol. 2, p. 114 (1801). Cap de Bonne-Espérance.
luteus, Schoenherr, Gen. Curc. Vol. 1, p. 440 (1833); Vol. 5, p. 720 (1840).

160. *B. maculatus*, Olivier, Encycl. Méth. Vol. 5, p. 183 (1790). Madagascar
maculatus, Herbst, Käf. Vol. 7, p. 92 (1797); Olivier, Ent. Vol. 5 (82), p. 45, pl. 2, f. 8 (1807); Schoenherr, Gen. Curc. Vol. 5, p. 613 (1840); Alluaud, in Grandidier, Hist. Nat. Madag. p. 406 (1900).
madagascariensis, Schoenherr, Gen. Curc. Vol. 5, p. 613 (1840).

161. *B. maculipes*, Chevrolat, Ann. Soc. Ent. Belg. Vol. 26. Bull. p. 89 (1882). Abyssinie.
maculipes, Fairmaire, ibidem, Vol. 37, p. 34 (1893).

162. *B. margaritifer*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 697 (1840) Cafrerie.
margaritifer, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 59 (1871).

163. *B. milleporus*, Wiedemann, in Germar, Ent. Mag. Vol. 4, p. 162 (1821). — **Pl. 2, Fig. 6.** Cafrerie, Cap de Bonne-Espérance.
milleporus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 706 (1840).
cavifrons, Gyllenhal, in Schoenherr, ibidem, Vol. 1, p. 436 (1833); Vol. 5, p. 717 (1840).
gemmosus, Gyllenhall, in Schoenherr, ibidem, Vol. 1, p. 436 (1833); Vol. 5, p. 706 (1840).
milleporellus, Bovie, Ann. Soc. Ent. Belg. Vol. 52, p. 43 (1908).
milleporus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 435 (1833); Vol. 5, p. 707, 717 (1840).

164. *B. modestus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 52 (1871). Cafrerie.

165. *B. moerens*, Pascoe, Trans. Ent. Soc. Lond. p. 17, pl. 2, f. 6 (1887). Zambèze.
divergens, Péringuey, ibidem, p. 187 (1896).

166. *B. moestus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 156 (1888). Namaqualand.

167. *B. monachus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 60 (1871). Cafrerie.

168. *B. morio*, Fabricius, Syst. Eleuth. Vol. 2, p. 416 (1801). Cap de Bonne-Espérance.
morio, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 438 (1833); Vol. 5, p. 711 (1840).

169. *B. muricatus*, Fabricius, Ent. Syst. Vol. 1 (2), p. 383 (1792); Syst. Eleuth. Vol. 2, p. 415 (1801). Sicile, Dalmatie, Autriche, Hongrie, Turquie, Asie mineure.
muricatus, Olivier, Ent. Vol. 5 (82), p. 19, pl. 13, f. 21 (1807); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 419 (1833); Vol. 5, p. 662 (1840); Redtenbacher, Fauna Austr. (ed. 2), p. 696 (1858); (éd. 3), p. 240 (1873); Seidlitz, Fauna Transsylv. p. 657 (1891).
foveicollis, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 419 (1833); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 191, pl. 4, f. 11 (1874).
pygmaeus, Vitale, Riv. Ital. Sc. Nat. Vol. 22, p. 12 (1902).
ventralis, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 366 (1871).

170. *B. namaqua*, Péringuey, Trans. S. Afr. Philos. Soc. p. 148, pl. 4, f. 6 (1888). Namaqualand.

171. *B. natalensis*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 48 (1871). Cafrerie.

172. *B. nebulosus*, Olivier, Ent. Vol. 5, (82), p. 60, pl. 3, f. 20 (1807). Cap de Bonne-Espérance.
nebulosus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 405 (1833); Vol. 5, p. 646 (1840).

173. *B. nodifrons*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 52 (1871). Cafrerie.

174. *B. nodulosus*, Fåhreus, ibidem, p. 19 (1871). Cafrerie.

175. *B. normandi*, Desbrochers, Le Frelon, Vol. 7, p. 11 (1899). Tunisie.

176. *B. nudus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 135, pl. 3, f. 3 (1885). Cap de Bonne-Espérance, Namaqualand.

177. *B. obesus*, Fabricius, Ent. Syst. p. 822 (1775); Spec. Ins. p. 195 (1781). Cap de Bonne-Espérance.
obesus, Sparrman, Act. Holm. p. 54, pl. 3, f. 32 (1785); Fabricius, Mant. Ins. Vol. 1, p. 120 (1787); Ent. Syst. Vol. 1, (2), p. 380 (1792); Herbst. Käf. Vol. 7, p. 78. pl. 101, f. 2 (1797); Thunberg, Nov. Act. Upsal. Vol. 6, p. 18 (1798); Fabricius, Syst. Eleuth. Vol. 2, p. 413 (1801).
afer, Wulfen, Ins. Cap. p. 15, pl. 1, f. 11 (1786).
oedematosus, Sulzer, Abgek. Gesch. Ins. p. 40, pl. 4, f. 10 (1776).

scalaris, Olivier, Encycl. Méth. Vol. 5, p. 183 (1790); Ent. Vol. 5 (82), p. 46, pl. 2, f. 18 (1807).
var. punctulatus, Olivier, Ent. Vol. 5 (82), p. 48, pl. 3, f. 87 (1807). — Cap de Bonne-Espérance.
var. tuberculatus, De Geer, Mém. Ins. Vol. 7, p. 658, pl. 49, f. 8 (1778).
var. obesus, Olivier, Encycl. Méth. Vol. 5, p. 184 (1790); Ent. Vol. 5 (82), p. 46, pl. 1, f. 1 (1807). — Cap de Bonne-Espérance.

178. *B. oblongus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 49 (1871). — Cap de Bonne-Espérance, Cafrerie, Natal.
fausti, Pascoe, Trans. Ent. Soc. Lond. p. 12, pl. 1, f. 8 (1887); Proc. Ent. Soc. Lond. p. 25 (1888).
praecursor, Pascoe, Trans. Ent. Soc. Lond. p. 12, pl. 1, f. 9 (1887).

179. *B. obtusus*, Pascoe, ibidem, p. 14, pl. 2, f 3 (1887). — Natal

180. *B. ocellatus*, Fabricius, Syst. Ent. p. 154 (1775); Spec. Ins. p. 196 (1781); Mant. Ins. Vol. 1, p. 121 (1787). — Madagascar.
ocellatus, Olivier, Encycl. Méth. Vol. 5, p. 183 (1790); Fabricius, Ent. Syst. Vol. (2), p. 379 (1792); Herbst, Käf. Vol. 7, p. 89 (1797); Thunberg, Nov. Act. Upsal. Vol. 6, p. 19 (1799); Fabricius, Syst. Eleuth. Vol. 2, p. 412 (1801); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 390 (1833); Vol. 5, p. 608 (1840); Alluaud, in Grandidier, Hist. Nat. Madag. p. 406 (1900).
madecassus, Péringuey, Ann. Soc. Ent. Belg. Vol. 32, Bull. p. 77 (1888); Fairmaire, Rev. Ent. Caen, p. 38 (1903).

181. *B. ochreosignatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 43 (1871). — Cafrerie.

182. *B. oxonchus*, Wiedemann, Zool. Mag. Vol. 2, p. 118 (1801). — Cap de Bonne-Espérance.
oxonchus, Schoenherr, Gen. Curc. Vol. 1, p. 440 (1833); Vol. 5, p. 720 (1840).

183. *B. papulosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 705 (1840). — Cap de Bonne-Espérance.

184. *B. parcus*, Kolbe, Arch. f. Naturg. Vol. 64, p. 243 (1898). — Tanganika.

185. *B. peregrinus*, Fåhraeus, Oefv. Vet -Akad. Förh. Vol. 28, p. 63 (1871). — Cafrerie.

186. *B. perplexus*, Fåhreus, ibidem, p. 51 (1871). — Cafrerie.

187. *B. perrieri*, Fairmaire, Rev. Ent. Caen, p 38 (1903) — Madagascar.

188. *B. pertusus*, Thunberg, Nov. Act. Upsal. Vol. 6, p. 36 (1799). — Cap de Bonne-Espérance. — **Pl. 2, Fig. 5.**
pertusus, Gyllenhal, in Schoenherr. Gen. Curc. Vol. 5, p. 713 (1840); Imhoff, Gen. Curc. Vol. 2, n° 12 (1846).
cancellatus, Schoenherr, Gen. Curc. Vol. 5, p. 713 (1840).

189. *B. petulcus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 429 (1833); Vol. 5, p. 686 (1840). — Cafrerie, Orange.

190. *B. phlyctaenoides*, Pascoe, Journ. Linn. Soc. Lond. Zool. Vol. 12, p. 13, pl. 1, f. 10 (1873). — Guinée.
phlyctaenoides, Péringuey, Trans. S. Afr. Philos. Soc. p. 72 (1892).

191. *B. phrygianus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 698 (1840). — Cap de Bonne-Espérance.

192. *G. phrynopterus*, Fairmaire, Ann. Soc. Ent. Belg. Vol. 26, Bull. p. 53 (1882). — Zanzibar.

193. *B. picturatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 45 (1871). — Cafrerie.

194. *B. pictus*, Germar, in Schoenherr, Gen. Curc. Vol. 1. p. 427 (1833); Vol. 5, p. 668 (1840). — Cap de Bonne-Espérance.

195. *B. piger*, Gyllenhal, in Schoenherr, ibidem, Vol. 5, p. 640 (1840). — Cafrerie.

196. *B. plicatus*, Gyllenhal, in Schoenherr, ibidem, Vol. 1, p. 415 (1833); Vol. 5, p. 659 (1840). — Espagne, Portugal.
plicatus, Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 164, pl. 4, f. 8, 13, 16 (1874).
scutipennis, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 363 (1871).
var. europaeus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 421 (1833); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 165 (1874). — Espagne.
var. insignis, Miller, Wien. Ent. Monats. p. 206 (1861). — Algérie, Grèce, Turquie.
vespertilio, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 363 (1871).
var. opacus, Wollaston, Cat. Canar. Col. p. 334 (1864). — Canaries.
var. tetanicus, Lucas, Explor. Algérie, Vol. 2, p. 414 (1849). — Espagne, Baléares, Algérie.

197. *B. polymastulus*, Kolbe, Arch. f. Naturg. Vol. 64, p. 242 (1898). — Zanzibar.

198. *B. polyophthalmus*, Guérin, Icon. Règne Anim. p. 140 (1829-38). — Cap de Bonne-Espérance.
polyophthalmus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 693 (1840).
oculatus, Guérin, Icon. Règne Anim. p. 140, pl. 37, f. 1 (1829-38); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 694 (1840).

199. *B. posticus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 643 (1840). — Cafrerie.

200. *B. pradieri*, Fairmaire, Ann. Soc. Ent. Fr. (3), Vol. 4, p. 536 (1856). — France occid., Espagne.
pradieri, Bedel, ibidem, (5), Vol. 4, p. 161 (1874); Bonnaire, ibidem, (5), Vol. 4, Bull. p. 194, 221 (1874); Marseul, Nouv. et Faits, p. 44 (1875) (larve); Laboulbène, Ann. Soc. Ent. Fr. (5), Vol. 5, p. 96 (1875) (larve); Baron, ibidem, (5), Vol. 5, Bull. p. 155, 162 (1875) (nymphe).
europaeus, Pradal, Hist. Col. Loire Inférr. p. 140 (1859).

201. *B. proletarius*, Péringuey, Trans. S. Afr. Philos. Soc. p. 158 (1888). — Namaqualand.

202. *B. pseudoscutellatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 63 (1871). — Cafrerie.

203. *B. puerilis*, Kolbe, Arch. f. Naturg. Vol. 64, p. 240 (1898). — Afrique orientale anglaise.

204. *B. pulvereus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 629 (1840). — Cap de Bonne-Espérance.

205. *B. pumilus*, Marshall, Deutsche Ent. Zeitschr. p. 481 (1907). — Cap de Bonne-Espérance.
nanus, Péringuey, Trans. S. Afr. Philos. Soc. p. 161 (1888).

206. *B. pustulosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 390 (1833); Vol. 5, p. 608 (1840). — Cap de Bonne-Espérance.

207. *B. racemus*, Gyllenhal, in Schoenherr, ibidem, Vol. 5, p. 673 (1840). — Cap de Bonne-Espérance.
uva, Gyllenhal. in Schoenherr, ibidem, Vol. 1, p. 402 (1833); Vol. 5, p. 673 (1840).

208. *B. raffrayi*, Chevrolat, Ann. Soc. Ent. Belg Vol. 26, Bull. p. 89, (1882). — Abyssinie.
raffrayi, Fairmaire, ibidem, Vol. 37, p. 35 (1893).

209. *B. reflexus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 620 (1840). — Cafrerie.

210. *B. reinhardti*, Gyllenhal, in Schoenherr, ibidem, p. 675 (1840). — Guinée.

211. *B. reticulatus*, Wiedemann, Zool. Mag. Vol. 2, p. 113 (1801). — Cap de Bonne-Espérance.
reticulatus, Schoenherr, Gen. Curc. Vol. 1, p. 434 (1833); Vol. 5, p. 683 (1840).

212. *B. reticulosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 434 (1833); Vol. 5, p. 714 (1840). — Cap de Bonne-Espérance.

213. *B. riguus*, Erichson, Wagner's Reise, Vol. 3, p. 185, pl. 8 (1841). — Algérie.
riguus, Küster, Käf. Eur. Vol. 2, p. 37 (1845); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 149 (1874).

214. *B. rotundatus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 136, pl. 2, f. 6 (1885). — Damaraland, Zambèze.

215. *B. rubiginosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 624 (1840). — Cap de Bonne-Espérance.

216. *B. rudis*, Gyllenhal, in Schoenherr, ibidem, p. 625 (1840). — Cap de Bonne-Espérance.

217. *B. rugipes*, Gyllenhal, in Schoenherr, ibidem, p. 629 (1840). — Cap de Bonne-Espérance.

218. *B. rugosus*, Thunberg, Nov. Act. Upsal. Vol. 6, p. 27 (1799). — Cap de Bonne-Espérance.
rugosus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 427 (1833); Vol. 5, p. 649 (1849).

219. *B. rugulosus*, Gyllenhal, in Schoenherr, ibidem, Vol. 5, p. 681 (1840). — Cafrerie.

220. *B. rusticanus*, Gyllenhal, in Schoenherr, ibidem, p. 669 (1840). — Cap de Bonne-Espérance.

221. *B. sacer*, Latreille, Descr. Ins. Afr. rec. par Caillaud, Vol. 4. p. 291 (1823). — Sennaar.
sacer, Bertolini, Nov. Comm. Accad. Bonon. Vol. 10, p. 401 (1849); Imhoff, Gen. Curc. Vol. 2, nº 14 (1846).
bufo, Boheman, in Schoenherr, Gen. Curc. Vol. 8 (2), p. 375 (1845).
var. pustulatus, Faust. Ann. Soc. Ent. Belg. Vol. 43, p. 401 (1899). — Kordofan.

222. *B. saginatus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. p. 799 (1840). — Cafrerie.

223. *B. salamensis*, Kolbe, Arch. f. Naturg. Vol. 64, p. 243 (1898). — Zanzibar.

224. *B. scabrosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 674 (1840). — Cap de Bonne-Espérance.

225. *B. scalaris*, Fabricius, Gen. Ins. Mant. p. 228 (1777); Spec. Ins. p. 195 (1787); Mant. Ins. Vol. 1, p. 120 (1787); Ent. Syst. Vol. 1 (2), p. 380 (1792). — Cap de Bonne-Espérance.

scalaris, Herbst, Käf. Vol. 7, p. 87 (1797); Thunberg, Nov. Act. Upsal. Vol. 6, p. 19 (1799); Fabricius, Syst. Eleuth. Vol. 2, p. 412 (1801); Schoenherr, Gen. Curc. Vol. 1, p. 392 (1833); Vol. 5, p. 610 (1840).

226. *B. scelestus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 715 (1840). Cafrerie, Cap de Bonne-Espérance.
scelestus, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 66 (1871).

227. *B. schalowi*, Quedenfeldt, Berl. Ent. Zeitschr. p. 285 (1888). Tanganika.

228. *B. scoposus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 400 (1833); Vol. 5, p. 644 (1840). Cap de Bonne-Espérance.

229. *B. scrobicollis*, Gyllenhal, in Schoenherr, ibidem, Vol. 5, p. 622 (1840). Cafrerie

230. *B. scrobiculatus*, Gyllenhal, in Schoenherr, ibidem, Vol. 1, p. 404 (1833); Vol. 5, p. 615 (1840). Cap de Bonne-Espérance.

231. *B. scrobipennis*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 53 (1871). Cafrerie.

232. *B. scrupulosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 701 (1840). Cap de Bonne-Espérance.
var. suspiciosus, Gyllenhal, in Schoenherr, ibidem, p. 701 (1840). Cap de Bonne-Espérance.

233. *B. sculpturatus*, Fåhraeus, in Schoenherr, ibidem, p. 678 (1840). Cap de Bonne-Espérance.
electilis, Pascoe, Trans. Ent. Soc. Lond. p. 14, pl. 2, f. 2 (1887); Proc. Ent. Soc. Lond. p. 25 (1888).

234. *B. scutellaris*, Lucas, Explor. Algérie, Vol. 2, p. 413, pl. 35, f. 9 (1849). Algérie.
scutellaris, Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 159, pl. 4, f. 14 (1874).
cirrosus, Lucas, Explor. Algérie, Vol. 2, p. 413, pl. 35, f. 8 (1849).

235. *B. scutirostris*, Germar, in Schoenherr, Gen. Curc. Vol. 1, p. 437 (1833). Patrie (?).
scutirostris, Fåhraeus, in Schoenherr, ibidem, Vol. 5, p. 637 (1840).

236. *B. semiocellatus*, Gyllenhal, in Schoenherr, ibidem, Vol. 1, p. 397 (1833); Vol. 5, p. 623 (1840). Sénégal.

237. *B. seriedendatus*, Fairmaire, Rev. Ent Caen, p. 39 (1903). Madagascar.

238. *B. serratus*, Thunberg, Nov. Act. Upsal. Vol. 6, p. 25 (1799). Cap de Bonne-Espérance.

239. *B. setiger*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 633 (1840). Cafrerie.

240. *B. setipennis*, Fåhraeus, Oefv. Vet.-Akad. Förh. p. 60 (1871). Cafrerie.

241. *B. setosus*, Wiedemann, in Germar, Ent. Mag. Vol. 4, p. 160 (1821). Cafrerie.
setosus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 431 (1833); Vol. 5, p. 688 (1840).

242. *B. severus*, Fåhraens, Oefv. Vet.-Akad. Förh. Vol. 28, p. 47 (1871). Cafrerie.

243. *B. signatus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 159 (1888). Cap de Bonne-Espérance.

244. *B. socors*, Fåhraeus, Oefv. Vet.-Akad. Förh. p. 51 (1871). Cafrerie.

245. *B. sparrmani*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 716 (1840). Cap de Bonne-Espérance.

246. *B. spinicollis*, Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 205, pl. 4, f. 7 (1874). Syrie.

247. *B. spiniger*, Fabricius, Syst. Eleuth. Vol. 2, p. 413 (1801). Guinée.
spiniger, Schoenherr, Gen. Curc. Vol. 1, p. 439 (1833); Gyllenhal, in Schoenherr, ibidem, Vol. 5, p. 691 (1840).

248. *B. spinipes*, Péringuey, Trans. S. Afr. Philos. Soc. p. 133, pl. 3, f. 4 (1885). Cap de Bonne-Espérance, Namaqualand.

249. *B. spissus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 708 (1840). Cafrerie.

250. *B. squalidus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 64 (1871). Cafrerie.

251. *B. squamosus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 128, pl. 2, f. 4 (1885). Damaraland.

252. *B. stellaris*, Olivier, Ent. Vol. 5 (82), p. 63, pl. 3, f. 36 (1807). Cap de Bonne-Espérance.
stellaris, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 424 (1833); Vol. 5, p. 635 (1840).
capito, Pascoe, Trans. Ent. Soc. Lond. p. 10, pl. 1, f. 5 (1887); Proc. Ent. Soc. Lond. p. 25 (1888).

253. *B. stricticus*, Panzer, Voets Beschr. u. Abbild. hartschaal. Ins. Coleopt. Heft 4, p. 42, pl. 34, f. D (1798). Cap de Bonne-Espérance.
americanus, Voet, Cat. Vol. 2, p. 45, index p. 16 (1806).

254. *B. strumosus*, Pascoe, Trans. Ent. Soc. p. 16, pl. 2, f. 8 (1887). — **Pl. 2, Fig. 3.** Sénégal, (Zambèze?).
schönherri, Péringuey, Trans. S. Afr. Philos. Soc. p. 149, pl. 4, f. 5 (1888).

255. *B. subfasciatus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 640 (1840). — Cap de Bonne-Espérance.
var. bardus, Gyllenhal, in Schoenherr, ibidem, p. 640 (1840). — Cap de Bonne-Espérance.
256. *B. sulcaticeps*, Kolbe, Arch. f. Naturg. Vol. 64, p. 44 (1898). — Zanzibar.
257. *B. sulcicollis*, Hartmann, Deutsche Ent. Zeitschr. p. 67 (1906). — Transvaal.
258. *B. suturalis*, Péringuey, Trans. S. Afr. Philos. Soc. p. 156, pl. 4. f. 1 (1888). — Transvaal.
259. *B. tauriculus*, Sparrman, Act. Holm. p. 51, pl. 3, f. 25 (1785). — Cap de Bonne-Espérance.
tauriculus, Olivier, Encycl. Méth. Vol. 5, p. 569 (1790).
inaequalis, Olivier, ibidem, p. 185 (1790); Fabricius, Ent. Syst. Vol. 1, (2), p. 382 (1792); Herbst, Käf. Vol. 7, p. 89 (1797); Fabricius, Syst. Eleuth. Vol. 2, p. 414 (1801); Olivier, Ent. Vol. 5 (82), p. 61, pl. 2, f. 12 (1807); Schoenherr, Gen. Curc. Vol. 1, p. 428 (1833).
260. *B. tenebrosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 630 (1840). — Cafrerie.
261. *B. tergosignatus*, Gyllenhal, in Schoenherr, ibidem, p. 702 (1840). — Cap de Bonne-Espérance.
262. *B. texatus*, Gyllenhal, in Schoenherr, ibidem, Vol. 1. p. 433 (1833); Vol. 5, p. 711 (1840). — Cap de Bonne-Espérance.
263. *B. torvus*, Gyllenhal, in Schoenherr, ibidem, Vol. 5, p. 691 (1840). — Cap de Bonne-Espérance.
264. *B. transversefoveatus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 154 (1888). — Namaqualand.
265. *B. transversus*, Olivier, Ent. Vol. 5, (82), p. 57, pl. 3, f. 23 (1807). — Algérie.
transversus, Gyllenhal, in Schoenherr, Gen. Curc Vol. 1, p. 415 (1833); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 148 (1873).
? *barbarus*, Latreille, Gen. Crust. Ins. Vol. 2, p. 253 (1807).
266. *B. tremens*, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 686 (1840). — Cafrerie.
— Pl. 2, Fig. 1.
267. *B. tuberosus*, Wiedemann, in Germar, Ent. Mag. Vol. 4, p. 160 (1821). — Cap de Bonne-Espérance.
instabilis, var. ε, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 667 (1840).
var. contextus, Gyllenhal, in Schoenherr, ibidem, Vol. 1, p. 423 (1833). — Cap de Bonne-Espérance.
instabilis, var. δ, Fåhraeus, in Schoenherr, ibidem, Vol. 5, p 666 (1840).
var. gemmatus, Thunberg, Nov. Act. Upsal. Vol. 6, p. 22 (1799). — Cap de Bonne-Espérance.
instabilis, var. γ, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 666 (1840).
var. instabilis, Fåhraeus, in Schoenherr, ibidem, p. 665 (1840). — Cap de Bonne-Espérance.
var. margaritaceus, Germar, in Schoenherr, ibidem, Vol. 1, p. 398 (1833). — Cap de Bonne-Espérance.
instabilis, var. β, Fåhraeus, in Schoenherr, ibidem, Vol. 5, p. 666 (1840).
var. subverrucosus, Fåhraeus, in Schoenherr, ibidem, p. 667 (1840). — Cap de Bonne-Espérance.
268. *B. turbatus*, Pascoe, Trans. Ent. Soc. Lond. p. 15, pl. 2, f. 5 (1887). — Natal.
269. *B. turgidus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 690 (1840). — Cap de Bonne-Espérance.
270. *B. turriferus*, Gyllenhal, in Schoenherr, ibidem, p. 623 (1840). — Cap de Bonne-Espérance.
271. *B. tursio*, Pascoe, Journ. Linn. Soc. Lond. Zool. Vol. 12, p. 6, pl. 1, f. 10 (1873). — Damaraland.
var. insignis, Péringuey, Trans. S. Afr. Philos. Soc. p. 127, pl. 2, f. 3 (1885). — Damaraland.
272. *B. ulcerosus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 668 (1840). — Cap de Bonne-Espérance.
273. *B. umbrinus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 55 (1871). — Cafrerie.
— Pl. 2, Fig. 11.
274. *B. undatus*, Fabricius, Ent. Syst. Suppl. p. 162 (1798); Syst. Eleuth. Vol. 2, p. 414 (1801). — Europe méridionale, Afrique boréale.
undatus, Olivier, Ent. Vol. 5 (82), p. 50, pl. 2, f. 16 (1807); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 408 (1833); Vol. 5, p. 653 (1840); Imhoff, ibidem, Vol. 2, n° 16 (1846); Jacquelin Du Val, Gen. Col. Curc. pl. 4, f. 20 (1854); Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 173 (1874); Laboulbène, ibidem, (5), Vol. 5, p. 95 (1875) (larve); Harold, Col. Heft. p. 146 (1879); Calwers, Käferb. pl. 28, f. 14 (1893); Rey, L'Echange, p. 63 (1894).
algirus, Olivier, Encycl. Méth. Vol. 5, p. 185 (1790); Herbst, Käf. Vol. 7, p. 91, pl. 101, f. 3 (1797).
barbarus, Linné, Syst. Nat. (ed. 12), p. 617 (1767) (deuxième partie de la description); Fabricius, Syst. Ent. p. 152 (1775); Spec. Ins. p. 194 (1781); Mant. Ins Vol. 1, p. 120 (1787); Villers, Car. Linn. Ent. Vol. 1, p. 211 (1789); Fabricius, Ent. Syst. Vol. 1 (2), p. 381 (1792); Thunberg,

Nov. Act. Upsal. Vol. 6, p. 24 (1799); Duméril, Cons. Gén. Ins. pl. 16, f. 4 (1823); Lucas, Explor. Algérie, Vol. 2, p. 412 (1849).
capensis, Schoenherr, Gen. Curc. Vol. 1, p. 427 (1833).
cornifrons, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 363 (1871).
corrosus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 409 (1833).
? *crispatus*, Latreille, Hist. Nat. Crust. Ins. Vol. 11, p. 253 (1804).
crispatus, Rey, L'Echange, p. 63 (1894).
europaeus, Thunberg, Nov. Act. Upsal. Vol. 6, p. 25 (1799).
hispidus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 361 (1871).
incultus, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 411 (1833).
lacunatus, Latreille, Hist. Nat. Crust. Ins. Vol. 11, p. 252 (1804).
lyrae, Vitale, Riv. Col. Ital. p. 206 (1905).
nubilus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 361 (1871).
ovatus, Brullé, Expéd. Sc. Morée, Vol. 3, p. 235, pl. 42, f 1 (1832).
pterygomalis, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 406 (1833).
quadratus, Voet, Cat. Vol. 2, p. 45, pl. 33, f. B (1806).
sericeus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 371 (1871).
serratus, Olivier, Ent. Vol 5 (82), p. 52, pl. 3, f. 30 (1807).
subvariolatus, Desbrochers, Mitth. Schweiz. Ent. Ges. p. 360 (1871).
var. mauritanicus, Olivier, Ent. Vol. 5 (82), p. 51, pl. 3, f. 22 (1807); Reiche, Ann. Soc. Ent. Fr. (3), Vol. 5, p. 661 (1857); Bedel, ibidem (5), Vol. 4, p. 174 (1874). — Europe méridionale, Afrique boréale.

275. *B. uva*, Sparrman, Act. Holm. p. 53, pl. 3, f. 29 (1785). — Cap de Bonne-Espérance.
uva, Fabricius, Ent. Syst. Vol. 1 (2), p. 383 (1792); Herbst, Käf. Vol. 7, p. 86 (1797); Fabricius, Syst. Eleuth. Vol. 2, p. 416 (1801); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 673 (1840).

276. *B. uvula*, Kolbe, Arch. f. Naturg. Vol. 64, p. 242 (1898). — Afrique orientale.

277. *B. vacca*, Thunberg, Nov. Act. Upsal. Vol. 6, p. 36 (1799). — Cap de Bonne-Espérance.
asper, Olivier, Ent. Vol. 5 (82), p. 64, pl. 3, f. 32 (1807); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 428 (1833); Vol. 5, p. 684 (1840).

278. *B. vagabundus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 54 (1871). — Cafrerie.

279. *B. variegatus*, Pape, Deutsche Ent. Zeitschr. p. 106 (1907). — Cafrerie.
sticticus, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 67 (1871).

280. *B. variipictus*, Quedenfeldt, Berl. Ent. Zeitschr. p. 284, pl. 6, f. 7 (1888). — Quango.

281. *B. variolosus*, Olivier, Encycl. Méth. Vol. 5, p. 185 (1790). — Cap de Bonne-Espérance.
variolosus, Herbst, Käf. Vol. 7, p. 95, pl. 101, f. 10 (1797); Olivier, Ent. Vol. 5 (82), p. 61, pl. 1, f. 7 (1807); Schoenherr, Gen. Curc. Vol. 1, p. 438 (1833); Vol. 5, p. 707 (1840).

282. *B. varius*, Péringuey, Trans. S. Afr. Philos. Soc. p. 155 (1888). — Afrique méridionale.

283. *B. venustus*, Wiedemann, Zool. Mag. Vol. 2, p. 116 (1801). — Cap de Bonne-Espérance.

284. *B. verrucifer*, Kirby, Trans. Linn. Soc. Lond. Vol. 12, p. 430 (1818). — Cap de Bonne-Espérance.
verrucifer, Schoenherr, Gen. Curc. Vol. 1, p. 431 (1833); Vol. 5, p. 683 (1840).

285. *B. verrucipennis*, Gyllenhal, in Schoenherr, ibidem, Vol. 1, p. 430 (1833); Vol. 5, p. 693 (1840). — Afrique méridionale.

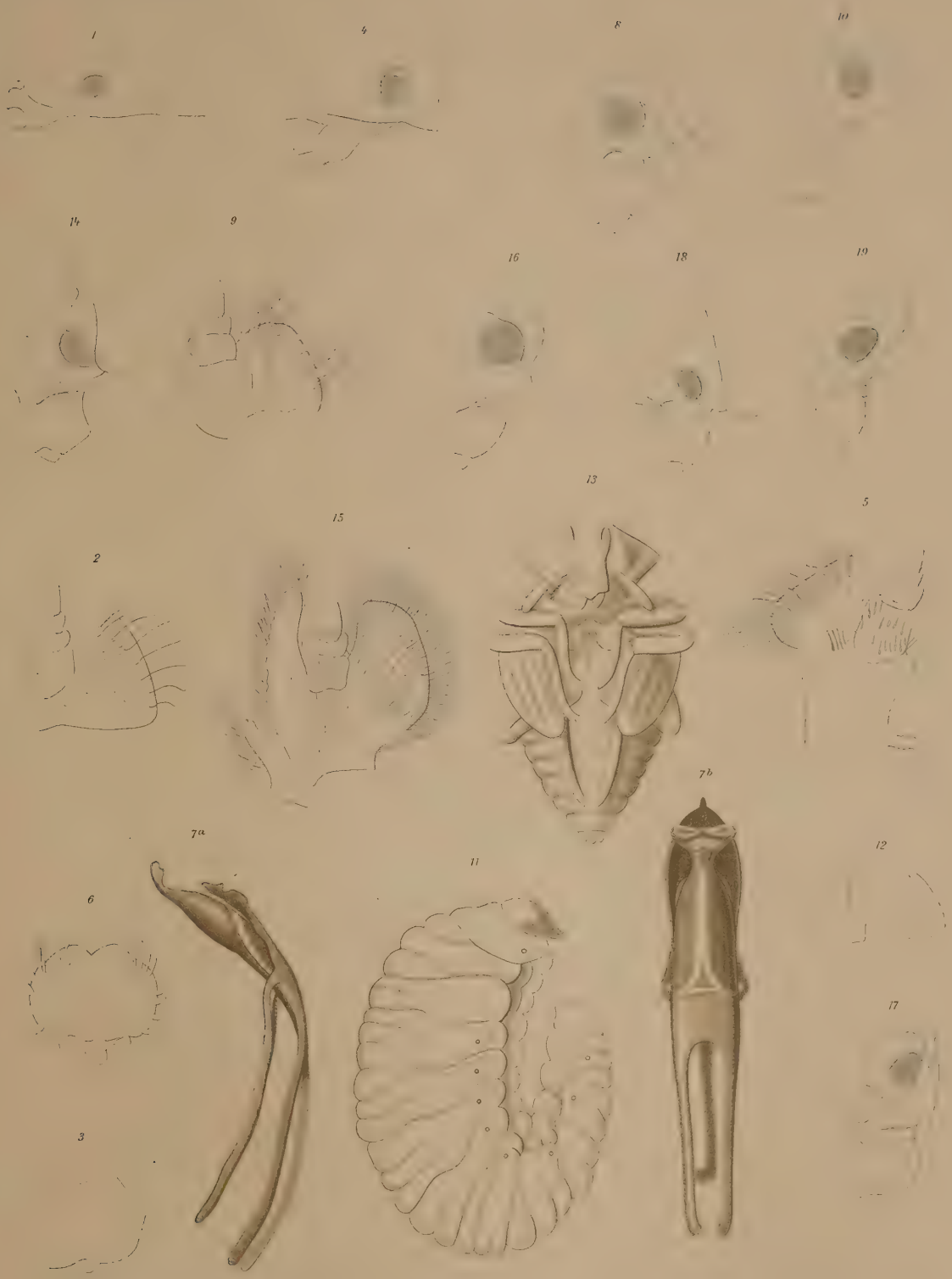
286. *B. verrucosiusculus*, Pape, Deutsche Ent. Zeitschr. p. 106 (1907). — Cafrerie.
subverrucosus, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 53 (1871).

287. *B. verrucosus*, Olivier, Encycl. Méth. Vol. 5, p. 184 (1790). — Namaqualand, Cap de Bonne-Espérance.
verrucosus, Herbst, Käf. Vol. 7, p. 94, pl. 101, f. 9 (1797); Olivier, Ent. Vol. 5 (82), p. 49, pl. 1, f. 2 (1807); Gyllenhal, in Schoenherr, Gen. Curc. Vol. 1, p. 396 (1833); Vol. 5, p. 620 (1840).
speciosus, Péringuey, Trans. S. Afr. Philos. Soc. p. 131, pl. 3, f. 1 (1885).
taeniatus, Thunberg, Nov. Act. Upsal. Vol. 6, p. 28 (1799).
var. nanus, Péringuey, Trans. S. Afr. Philos. Soc. p. 132 (1885). — Cap de Bonne-Espérance.

288. *B. vestitus*, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 628 (1840). — Cafrerie.

289. *B. viduatus*, Péringuey, Trans. S. Afr. Philos. Soc. p. 73 (1892). — Afrique méridionale occidentale.

290. *B. wahlbergi*, Fåhraeus, Oefv. Vet. Akad. Förh. Vol. 28, p. 45 (1871). — Cafrerie.
wahlbergi, Péringuey, Trans. S. Afr. Philos. Soc. p. 74 (1892).



FAM. CURCULIONIDÆ

SUBFAM. BRACHYCERINÆ

291. *B. westermanni*, Fåhraeus, in Schoenherr, Gen. Curc. Vol. 5, p. 607 (1840). — **Pl. 2, Fig. 12.** Cap de Bonne-Espérance.
292. *B. seyheri*, Gyllenhal, in Schoenherr, ibidem, p. 682 (1840). Cafrerie.

* * *

australis, Germar, est un *Amorphorrhinus* (Amycterinæ).
omissus, Pascoe, est un *Hoplitotrachelus* (Byrsopinæ).
sibiricus, Thunberg, est un *Deracanthus* (Leptopsinæ).
tuberculosus, Gyllenhal, est un *Brachyceropsis* (Dinomorphinæ).

3. Genus THEATES, Fåhraeus

Theates. Fåhraeus, Oefv. Vet.-Akad. Förh. Vol 28, p. 68 (1871).

Caractères. — Rostre un peu plus long que la tête, plan en dessus, difforme, un peu élargi en avant. Antennes insérées vers le milieu du rostre, un peu plus près de la base que de l'extrémité, le scape n'atteignant pas les yeux, les articles du funicule serrés, grossissant graduellement, cylindriques, massue pointue à l'extrémité. Yeux peu saillants, subarrondis, portés au revers de deux crêtes situées latéralement sur le front; ces crêtes élevées, un peu pointues à leur partie supérieure. Thorax portant en dessus une double crête saillant au-dessus de la tête, les côtés munis d'une épine obsolète, fortement rugueux en dessus. Pas d'écusson. Elytres légèrement plus étroites à leur base que le thorax, arrondies sur les côtés, munies de tubercules régulièrement placés en séries. Pattes peu robustes, hanches antérieures et intermédiaires contiguës, les postérieures séparées, tibias droits, un peu comprimés, tarses subcylindriques, les trois premiers articles subégaux, le quatrième presque aussi long que les trois autres ensemble; crochets grands, libres. Segments abdominaux séparés par une suture droite. Corps aptère.

Les *Theates* sont de petits Brachyceridæ d'un centimètre de longueur maximum, d'un brun noirâtre, parfois un peu varié de quelques taches noires et blanches, celles-ci principalement sur les pattes.

Distribution géographique des espèces. — Ce genre ne comprend actuellement que quatre espèces africaines.

1. *T. angusticollis*, Wiedeman, Zool. Mag. p. 119 (1801). Cap de Bonne-Espérance.
   angusticollis, Gyllenhal, in Schoenherr, Gen. Curc. Vol. 5, p. 703 (1840); Marshall, Proc. Zool. Soc. Lond. p. 957 (1906).
   cristatus, Péringuey, Trans. S. Afr. Philos. Soc. p. 163, pl. 3, f. 14 (1888).
   magus, Aurivillius, Ent. Tidskr. p. 153, pl. 2, f. 1-3 (1888).
2. *T. ludificator*, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 22 (1885); Ent. Tidskr. p. 152, pl. 2, f. 10-12 (1888). — **Pl. 1, Fig. 8.** N'Gami.
3. *T. petiolatus*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 68 (1871). Cafrerie.
   petiolatus, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 22 (1885); Ent. Tidskr. p. 151, pl. 2, f. 7-9 (1888).
4. *T. spectator*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 68 (1871). Cafrerie.
   spectator, Aurivillius, Oefv. Vet.-Akad. Förh. Vol. 42, p. 22 (1885); Ent. Tidskr. p. 152, pl. 2, f. 4-6 (1888).

4. Genus EURETUS, Péringuey

Euretus. Péringuey, Trans. Ent. Soc. Lond. p. 186 (1896).

Caractères. — Rostre peu allongé, tête courte, ayant au-dessus des yeux une crête élevée, étroite, antennes courtes, les deux premiers articles plus gros que les suivants, ceux-ci plus courts de

près de moitié. Yeux peu convexes, en triangle à pointes arrondies, acuminés inférieurement. Thorax plus long que large, portant au-dessus deux crêtes tuberculeuses, côtés arrondis. Elytres gibbeuses, subpédonculées, arrondies sur les côtés, offrant chacune, au-dessus, deux séries de tubercules. Tarses courts, larges, insérés sur les côtés des tibias, derniers articles à crochets libres. Prosternum sans sillon pour loger le rostre. Les hanches des deux premières paires de pattes contiguës, celles de la troisième paire séparées. Segments de l'abdomen séparés par une suture droite, le dernier seul a la suture s'infléchissant brusquement en angle vers son extrémité. Corps aptère.

L'*Euretus aurivillii* est un petit Brachycérine d'environ 7 millimètres de longueur, d'un noir sale, remarquable par son facies tout spécial produit par le peu de largeur de son prothorax par rapport aux élytres et l'espèce d'étranglement qui sépare ces deux parties de l'insecte. Les élytres, à leur plus grande largeur, sont près de trois fois aussi large que le thorax en son milieu.

Distribution géographique de l'espèce. — On n'en connaît qu'une espèce de la Colonie du Cap.

1. *E. aurivillii*, Péringuey, Trans. Ent. Soc. Lond. p. 186 (1896). — **Pl. I,** Fig. 9. Cap de Bonne-Espérance.

5. Genus HERPES, Bedel

Herpes. Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 212 (1874).
Pterothorax. Weise, Deutsche Ent. Zeitschr. p. 68 (1893).

Caractères. — Tête transversale, portant au-dessus, de chaque côté, une crête élevée au-dessus des yeux. Rostre court, épais, légèrement arqué. Antennes légèrement courbé, scape atteignant les yeux; funicule de sept articles, les deux premiers articles un peu globuleux, plus gros que les suivants, ceux-ci allant graduellement en s'élargissant, le septième très grand, massue ovalaire, pointue à l'extrémité. Yeux petits, un peu allongés vers le bas, peu convexes. Prothorax légèrement plus large que long, ayant de chaque côté une forte protubérance épineuse et au-dessus, à l'avant, deux fortes crêtes séparées par un sillon longitudinal. Pas d'écusson. Elytres très légèrement plus larges à leur base que le thorax, brusquement et fortement déclives à l'arrière, couvertes de tubercules placés en séries parallèles. Hanches antérieures contiguës, les intermédiaires légèrement séparées, les postérieures très distantes l'une de l'autre. Cuisses inermes, tibias tronqués à l'extrémité, tarses insérés au milieu de la troncature, les trois premiers articles égaux, ongles grands, libres. Pas de canal au prosternum pour loger le rostre. Segments abdominaux séparés par une suture très légèrement arquée. Corps aptère.

L'*Herpes porcellus*, seule espèce de ce genre, n'atteint guère qu'environ 7 millimètres, c'est un insecte d'un noir grisâtre que Lacordaire avait placé dans le genre *Brachycerus*, tout en reconnaissance qu'il devait former un genre distinct.

Mœurs et Métamorphoses. — Je n'ai pu me procurer que peu de choses au sujet des mœurs et des métamorphoses d'*Herpes porcellus;* quelques mots à ce sujet sont seulement donnés par J. Bourgeois dans les *Bulletins de la Société Entomologique de France* (p. 94, [1906]). D'après cet auteur, qui tient ses renseignements de Montandon, cette larve vivrait sur les feuilles de certaines plantes non déterminées, contrairement aux *Brachycerus* qui sont souterrains. Cette larve formerait une coque ressemblant à celle formée par les larves d'*Hypera*, mais plus courte, presque sphérique, alors que celle d'*Hypera* est un peu allongée et ovalaire. C'est vers le milieu de mai que l'on trouve les coques d'*Herpes porcellus* collées à la face supérieure des feuilles et leur éclosion aurait lieu au commencement de juin.

Cette espèce hiverne probablement à l'état d'insecte parfait; Montandon en aurait recueilli vers la fin mars une petite colonie paraissant sortir de terre; les insectes grimpaient le long de vieux bois équarris situés à proximité et cherchaient à s'accoupler.

Il se pourrait fort bien toutefois qu'il y aurait erreur provenant d'une observation faite un peu rapidement. Peut-être, cette espèce, comme les *Brachycerus*, ses voisins, vivrait-elle à l'état de larve dans les racines des plantes et remonterait alors par une galerie creusée à l'intérieur de la plante nourricière, jusqu'au-dessus du sol où elle se tranformerait en nymphe? Des observations ultérieures pourront élucider cette question.

Distribution géographique de l'espèce. — Une seule espèce forme actuellement ce genre.

1. *H. porcellus,* Lacordaire, Gen. Col. Vol. 6, p. 285, note 2 (1863). — Balkans, Turquie, Asie mineure. **Pl. I, Fig. 10.**

porcellus, Bedel, Ann. Soc. Ent. Fr. (5), Vol. 4, p. 202 (1874); Bourgeois, ibidem, Bull. p. 94 (1906) (métam.).
korbi, Weise, Deutsche Ent. Zeitschr. p. 68 (1893).

3. TRIBUS BROTHEINI

Brotheinæ. Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 89 (1907).

Caractères. — Ce groupe a été formé par G. Marshall pour les genres *Synthocus*, *Brotheus* et *Euryxena*, comme formant une nouvelle division des *Brachycerides* sensu Aurivillius. Il se distingue des deux autres groupes, *Microcerini* et *Brachycerini,* par la présence, dans le prosternum, d'un sillon où le rostre vient se loger au repos; comme les deux autres groupes, il a les tarses linéaires, nus ou villeux en dessous, mais non spongieux, les antennes arquées mais non coudées, le corps est aptère. Cet auteur répartit les trois genres connus de la manière suivante :

TABLE DES GENRES

1. *Saillie du metasternum pointue entre les hanches; hanches intermédiaires contiguës ou très peu séparées* . . . . . 2.
2. *Tête portant, au dessus des yeux, une crête saillante* . . . . . 1. G. Synthocus, Schoenherr.
2'. *Tête sans crête saillante au-dessus des yeux* . . . . . 2. G. Brotheus, Stephens.
1'. *Saillie du metasternum tronquée entre les hanches; hanches intermédiaires largement séparées* . . . . . 3. G. Euryxena, Pascoe.

Une révision, avec tables dichotomiques des espèces de ces trois genres, a été publiée par G. Marshall dans *Trans. S. Afr. Philos. Soc.* Vol. 18, p. 89-120, pl. 6, f. 7-15 (1907).

Distribution géographique de la tribu. — Toutes les espèces composant cette tribu appartiennent à la faune africaine.

1. Genus SYNTHOCUS, Schoenherr

Synthocus. Schoenherr, Gen. Curc. Vol. 6 (2), p. 408 (1842).
Daulaxius. Pascoe, Trans. Ent. Soc. Lond. p. 333 (1887).

Caractères. — Rostre continu avec la tête, plus ou moins arqué et épais, presque parallèle, ses scrobes étroites et profondes, brusquement arquées. Yeux latéraux, déprimés, acuminés inférieurement.

Antennes courtes et peu robustes, arquées plutôt que coudées, le scape court et subconique, funicule de sept articles, les deux premiers allongés et subégaux, les suivants transversaux et plus ou moins dilatés à la pointe, massue en ovale court, acuminée et articulée. Prothorax muni de lobes oculaires proéminents et couvrant les yeux, prosternum muni d'un profond canal pour loger le rostre au repos. Elytres de forme variable, leur base plus large que le prothorax. Pattes courtes et robustes, fémurs inermes, tibias linéaires, ayant une courte épine à l'angle apical interne; tarses ciliés en dessous, leur quatrième article aussi grand que le deuxième et le troisième réunis. Hanches antérieures contiguës, les intermédiaires contiguës ou peu séparées, les postérieures fortement séparées l'une de l'autre. Segments abdominaux séparés par une suture droite. Corps aptère, généralement écailleux.

Les *Synthocus* atteignent jusqu'à 15 millimètres de longueur environ; ils sont parfois, tel le *nigropictus*, agrémenté de quelques teintes assez vives, produites par la présence de nombreuses petites écailles.

Daulaxius, Pascoe, a été réuni à *Synthocus* par Marshall; le seul caractère différentiel est la contiguité plus forte des hanches intermédiaires. Toutefois, ce genre, ainsi compris, ne serait pas homogène et présentait des transitions avec *Synthocus*.

Distribution géographique des espèces. — Les dix-huit espèces connues actuellement appartiennent toutes à la faune africaine.

1. *S. acuticollis*, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 96, pl. 6, f. 8 (1907).	Namaqualand.
2. *S. adustus*, Pascoe, Journ. Linn. Soc. Lond. Zool. Vol. 10, p. 464 (1870). *adustus*, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 102 (1907). *sordidus*, Péringuey, ibidem, p. 140 (1885).	Bechuanaland, Damaraland
3. *S. damarensis*, Marshall, ibidem, Vol. 18, p. 96 (1907).	Damaraland.
4. *S. dorsalis*, Fåhraeus, Oefv. Vet.-Akad. Förh. Vol. 28, p. 198 (1871). *dorsalis*, Marshall, Trans. S. Afr. Philos. Soc. Vol 18, p. 95 (1907).	Mashonaland, Matabeleland
5. *S. flavotuberosus*, Marshall, ibidem, p. 101, pl. 6, f. 10 (1907).	Damaraland.
6. *S. frater*, Marshall, ibidem, p. 99, pl. 6, f. 9 (1907).	Namaqualand.
7. *S. hopei*, Boheman, in Schoenherr, Gen. Curc. Vol. 6 (2), p. 412 (1842). *hopei*, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 92 (1907). *paradoxis*, Péringuey, ibidem, p. 137, pl. 3, f. 5 (1885).	Cap de Bonne-Espérance, Namaqualand,
8. *S. mashunus*, Marshall, ibidem, Vol. 18, p. 104 (1907).	Mashonaland, Matabeleland
9. *S. nigropictus*, Pascoe, Journ. Linn. Soc. Lond. Zool. Vol. 10, p. 463, pl. 19, f. 11 (1870). — **Pl. I, Fig. 11.** *nigropictus*, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 102 (1907). *sagittarius*, Péringuey, ibidem, p. 139 (1885).	Damaraland.
10. *S. ovampoensis*, Marshall, ibidem, Vol. 18, p. 98, pl. 6, f. 7 (1907).	Ovampoland.
11. *S. parvus*, Péringuey, ibidem, p. 164 (1888). *parvus*, Marshall, ibidem, Vol. 18, p. 99 (1907).	Cap de Bonne-Espérance, Transvaal, Ovampoland.
12. *S. plagosus*, Péringuey, ibidem, p. 138 (1885). *plagosus*, Marshall, ibidem, Vol. 18, p 103 (1907).	Cap de Bonne-Espérance.
13. *S. quadripennis*, Péringuey, ibidem, p. 165 (1888). *quadripennis*, Marshall, ibidem, Vol. 18, p. 97 (1907).	Namaqualand.
14. *S. reichei*, Boheman, in Schoenherr, Gen. Curc. Vol. 6 (2), p. 411 (1842). *reichei*, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 100 (1907).	Cap de Bonne-Espérance.
15. *S. sinuatus*, Marshall, ibidem, p. 94 (1907).	Soudan, Mashonaland, Bechuanaland.
16. *S. stolatus*, Pascoe, Trans. Ent. Soc. Lond. p. 333, pl. 11, f. 11 (1887). *stolatus*, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 105 (1907).	Delagoa.
17. *S. truncatus*, Boheman, in Schoenherr, Gen. Curc. Vol. 6 (2), p. 410 (1842). *truncatus*, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 93 (1907). *informis*, Chevrolat, in Guérin, Icon. Règne Anim. p. 143, pl. 37, f. 8 (1844).	Cap de Bonne-Espérance, Sénégal.

18. *S. wardeni*, Péringuey, Trans. S. Afr. Philos. Soc. p. 165, pl. 3, f. 13 (1888). Namaqualand.
wardeni, Marshall, ibidem, Vol. 18, p. 105 (1907).
var. bicuspis, Marshall, ibidem, p. 106 (1907). Namaqualand.

* * *

S. deformis, Boheman, et
S. spinulosus, Boheman, sont des *Byrsops* (Byrsopinæ).

2. Genus BROTHEUS, Stephens

Brotheus. Stephens, Illust. Brit. Ent. Vol. 4, p. 152 (1871).
Ixodicus. Pascoe, Journ. Linn. Soc. Lond. Zool. Vol. 11, p. 448 (1873).

Caractères. — Rostre court, robuste, placé au repos dans un canal situé en dessous du prothorax. Tête sans crête saillante au-dessus des yeux, antennes arquées, de douze articles, le premier légèrement allongé, robuste, en massue, les autres avant la massue courts et noueux, la massue grande, ovale, acuminée. Yeux déprimés, cachés au repos. Prothorax en carré oblong, muni au-dessus d'une carène longitudinale, le bord antérieur lobé derrière les yeux. Elytres courtes, convexes, oblongo-ovales ou subquadrangulaires, un peu ou beaucoup plus larges aux épaules que le prothorax. Pattes courtes et robustes, tarses larges, robustes, villeux, les crochets grands et libres. Corps aptère.

Je n'ai pas vu en nature d'espèce de ce genre, la formule qui précède est empruntée partie à Lacordaire, partie à Marshall. Ce genre a été fondé par Stephens sur un insecte, le *porcatus*, qu'il avait trouvé dans son jardin, en Angleterre, à une racine d'*Ornithogalum* et qui avait ainsi été importé d'Afrique méridionale. Depuis, cette espèce a été reconnue comme étant la même que celle décrite antérieurement par Thunberg sous le nom de *Brachycerus praemorsus*.

Marshall a reconnu l'identité du genre *Ixodicus* de Pascoe avec *Brotheus*, Stephens.

Ce sont des insectes d'environ un centimètre de longueur, offrant deux aspects principaux selon que les élytres ont les bords subparallèles, tel que le *binodosus*, Marshall, ou que les élytres, beaucoup plus élargies, paraissent plutôt hexagonales, tels les *pumilus* et *flexuosus* de Marshall.

Distribution géographique des espèces. — Douze espèces de l'Afrique méridionale composent ce genre.

1. *B. binodosus*, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 108, pl. 6, f. 11. — **Pl. I, Fig. 12.** Cap de Bonne-Espérance.
2. *B. carinatus*, Marshall, ibidem, p. 110, pl. 6, f. 14 (1907). Cap de Bonne-Espérance.
3. *B. crenelatus*, Marshall, ibidem, p. 112, pl. 6, f. 12 (1907). Cap de Bonne-Espérance.
4. *B. flexuosus*, Marshall, ibidem, p. 117, pl. 6, f. 15 (1907). — **Pl. I, Fig. 13.** Cap de Bonne-Espérance.
5. *B. laevigatus*, Marshall, ibidem, p. 109 (1907). Cap de Bonne-Espérance.
6. *B. occlusus*, Pascoe, Journ. Linn. Soc. Lond. Vol. 11, p. 448, pl. 13, f. 8 (1872). Cap de Bonne-Espérance.
occlusus, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 114 (1907).
7. *B. planus*, Thunberg. Nov. Act. Upsal. Vol. 6, p. 35 (1799). Cap de Bonne-Espérance.
planus, Schoenherr, Gen. Curc. Vol. 2, p. 413 (1834); Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 112 (1907).
8. *B. praecisicollis*, Marshall, Trans. S. Afr. Philos. Vol. 18, p. 109 (1907). Afrique méridionale.
9. *B. praemorsus*, Thunberg, Nov. Act. Upsal. Vol. 6, p. 33 (1799). Cap de Bonne-Espérance.
praemorsus, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 415 (1907).
deprimatus, Boheman, in Schoenherr, Gen. Curc. Vol. 6 (2), p. 407 (1842).
porcatus, Marsham, Ent. Brit. p. 255 (1802); Stephens, Illustr. Brit. Ent. Vol. 4, p. 154 (1831).

10. *B. pumilus*, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 116, pl. 6, f. 13 (1907). Cap de Bonne-Espérance.

11. *B. pusio*, Wiedeman, Zool. Mag. Vol. 2, p. 113 (1823). Cap de Bonne-Espérance.
pusio, Marshall, Trans. S. Afr. Philos. Soc. Vol. 18, p. 111 (1907).

12. *B. sordidus*, Pascoe, Journ. Linn. Soc. Lond. Zool. Vol. 11, p. 448 (1872). Cap de Bonne-Espérance.
sordidus, Marshall. Trans. S. Afr. Philos. Soc. Vol. 18, p. 113 (1907).

3. Genus EURYXENA, Pascoe

Euryxena. Pascoe, Trans. Ent. Soc. Lond. p. 337 (1887).

Caractères. — Ce genre est très voisin de *Synthocus* et de *Brotheus*, il s'en différencie principalement par le rostre médiocre, les antennes courtes, le premier article du funicule épaissi, le prothorax transversal, les élytres courtes, planes, brusquement déclives à l'arrière, le prosternum profondément excavé, le mésosternum large, tronqué en avant; les pattes médiocres, les cuisses un peu épaissies, les tibias sont munis à l'extrémité d'une épine, les tarses grêles, les trois premiers articles subégaux, le quatrième aussi long que le deuxième et le troisième réunis, les crochets grands et libres, les hanches antérieures contiguës, les intermédiaires et surtout les postérieures séparées, la saillie du métasternum tronquée entre les hanches.

Je n'ai pas vu en nature l'unique espèce du genre, le *bruchoides* de Pascoe; la figure qu'il en donne est trop petite pour pouvoir bien reconnaître les détails. C'est un petit Curculionide d'environ huit millimètres de longueur, couvert, dit-il, d'une squamosité d'un gris fauve plus sombre sur les élytres.

Distribution géographique de l'espèce. — Celle-ci est originaire de l'Afrique du Sud.

1. *E. bruchoides*, Pascoe, Trans. Ent. Soc. Lond. p. 338, pl. 11, f. 1 (1887). Cap de Bonne-Espérance.
bruchoides, Marshall, Trans. S. Afr. Philos. Soc. Vol, 18, p. 118 (1907).

TABLEAU RÉSUMANT LA DIVISION DES BRACHYCERINÆ

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subverrucosus	25
subverrucosus	26
sulcaticeps	25
sulcicollis	25
sulcifrons	7
sulcifrons	14
superciliosus	16
suspiciosus	24
suturalis	25
suturalis	17
Synthocus	29
taeniatus	26
T-album	5
tauriculus	25
tauricus	20
tenebrosus	25
tenuis	6
tergosignatus	25
tessellatus	14
tetanicus	22
texatus	25
Theates	27
thunbergi	5
thunbergi	19
torvus	25
transversefoveatus	25
transversus	25
tremens	25
truncatus	6
truncatus	30
tuberculatus	22
tuberculosus	27
tuberifrons	8
tuberosus	6
tuberosus	25
turbatus	25
turgidus	25
turriferus	25
tursio	25
tutanus	8
ulcerosus	25
umbrinus	25

	Pages		Pages		Pages		Pages
undatus	25	variegatus	26	vermiculatus	8	wahlbergi	26
ungulatus	15	variipictus	26	verrucifer	26	*wahlbergi*	4
uva	26	variolosus	26	verrucipennis	26	wardeni	31
uva	20	*variolosus*	15	verrucosiusculus	26	westermanni	6
uva	23	varius	26	verrucosus	26	westermanni	27
uvula	26	*velutinus*	20	*vespertilio*	22		
		ventralis	21	vestitus	26	zeyheri	27
vacca	26	venustus	26	viduatus	26		
vagabundus	26						

EXPLICATION DES PLANCHES

Les traits indiquent la longueur totale des insectes, rostre compris; lorsque celui-ci est naturellement penché, il a été redressé afin de pouvoir être figuré dans son entier.

Les dessins ont été exécutés par E. Menger, les originaux en sont déposés au Musée d'Histoire Naturelle de Bruxelles.

Planche 1

Fig. 1. *Episus cyathiformis,* Gyllenhal. (Détermination Faust, collection Bovie.)
— 2. — *fahraei*, Aurivillius. (Détermination Heller, collection Bovie.)
— 3. *Microcerus costalis*, Fåhraeus. (Détermination Heller, collection Bovie.)
— 4. — *spiniger*, Gerstäcker. (Détermination Kolbe, collection Bovie.)
— 5. — *fahraei*, Jekel. (Détermination Heller, collection Bovie.)
— 6. *Gyllenhalia spectrum*, Fabricius. (Collection Musée de Bruxelles.)
— 7. *Protomantis dregei*, Gyllenhal. (Collection et détermination Marshall.)
— 8. *Theates ludificator*, Aurivillius. (Collection et détermination Marshall.)
— 9. *Euretus aurivillii*, Péringuey. (Détermination Marshall, collection Musée de Bruxelles.)
— 10. *Herpes porcellus*, Lacordaire. (Détermination Montandon, collection Bovie.)
— 11. *Synthocus nigropictus*, Pascoe. (Détermination Marshall, collection Bovie.)
— 12. *Brotheus binodosus*, Marshall. (D'après Marshall.)
— 13. — *flexuosus,* Marshall. (D'après Marshall.)

Planche 2

Fig. 1. *Brachycerus tremens*, Fåhraeus. (Détermination Marshall, collection Bovie.)
— 2. — *kumbanensis*, Quedenfeldt. (Détermination Heller, collection Bovie.)
— 3. — *strumosus*, Pascoe. (Détermination Heller, collection Bovie.)
— 4. — *cornutus*, Linné. (Détermination Faust, collection Bovie.)
— 5. — *pertusus,* Thunberg. (Détermination Marshall, collection Bovie.)
— 6. — *milleporus*, Wiedemann. (Détermination Marshall, collection Bovie.)
— 7. — *apterus*, Linné. (Détermination Faust, collection Bovie.)
— 8. — *cordiger*, Sparrmann. (Détermination Marshall, collection Bovie.)
— 9. — *anaglypticus,* Gyllenhal. (Détermination Marshall, collection Bovie.)

Fig. 10. *Brachycerus hoffmanni*, Faust. (Détermination Faust, collection Bovie.)
— 11. — *umbrinus*, Fåhraeus. (Détermination Marshall, collection Bovie.)
— 12. — *westermanni*, Fåhraeus. (Détermination Marshall, collection Bovie.)

Planche 3

Fig. 1. *Episus cyathiformis*, Gyllenhal, rostre vu de profil.
— 2. — *brevicollis*, Jekel, mâchoire. (D'après Aurivillius.)
— 3. — — — menton. (D'aprés Aurivillius.)
— 4. *Microcerus spiniger*, Gerstäcker, rostre vu de profil.
— 5. — *latipennis*, Fåhraeus, mâchoire. (D'après Aurivillius.)
— 6. — — — menton. (D'après Aurivillius.)
— 7. — *costalis*, — organes de copulation. (D'après Aurivillius.)
— 8. *Gyllenhalia spectrum*, Fabricius, rostre vu de profil.
— 9. — — — mâchoire. (D'après Aurivillius.)
— 10. *Protomantis dregei*, Gyllenhal, rostre vu de profil.
— 11. *Brachycerus albidentatus*, Gyllenhal, larve. (D'après Perris.)
— 12. — — — mâchoire de la larve. (D'après Perris.)
— 13. — — — nymphe. (D'après Perris.)
— 14. — *cornutus*, Linné, rostre vu de profil.
— 15. — *apterus*, Linné, mâchoire. (D'après Aurivillius.)
— 16. *Theates ludificator*, Aurivillius, rostre vu de profil.
— 17. *Euretus aurivillii*, Péringuey, rostre vu de profil.
— 18. *Herpes porcellus*, Lacordaire, rostre vu de profil.
— 19. *Synthocus nigropictus*, Pascoe, rostre vu de profil.

Bruxelles, 1er Octobre 1909.

LEPIDOPTERA

FAM. PTEROPHORIDÆ

LEPIDOPTERA HETEROCERA

(PYRALES)

FAM. PTEROPHORIDÆ

by E. MEYRICK

WITH 1 COLOURED PLATE

General characters. — Head often with forked scales; ocelli usually concealed or obsolete, seldom distinct. Tongue well-developed. Maxillary palpi obsolete. Forewings with vein 1*b* simple or shortly furcate, 5 remote from 4, 7 separate or out of 8, 8 and 9 stalked or coincident or seldom separate (*Agdistis*), 10 and 11 sometimes out of 9 or absent, wing usually fissured, forming two or rarely three or four segments. Hindwings without defined pecten of hairs on lower margin of cell, on lower surface with a more or less developed double row of short spine-like dark scales on lower margin of cell; 5 remote from 4, 7 remote from 6, approximated shortly to 8 beyond origin, wing usually fissured, forming three segments.

An absolute character for this family is presented by the series of spine-like scales on lower surface of hindwings, which are found in every species seen by me, and to which I can find nothing analogous in any allied family. The trifid hindwings are a very characteristic structure, being found in no other family, but are not constant, failing in the *Agdistis* group. The singular erect linear forked scales which are often seen on the crown of the head are also confined to this family, but are not found in all genera, and vary much in different species, the furcation being often slight or rudimentary. The absence of maxillary palpi is invariable and important, as those groups of the *Pyralidina*, which seem to approach nearest to this family, usually have them more or less developed.

The family is an aberrant group of the *Pyralidina*, with some relation to the *Oxychirotidae*, *Orneodidae*, and *Pyraustidae*, but no close or obvious connection with any of these, the indications of affinity being merely general. It probably originated early in the history of the *Pyralidina*, and its ancestral forms are apparently extinct. From the distribution of the genera I infer the place of origin to have been in the continent of Asia; and from the character of the foodplants, which are always

Dicotyledonous plants of high organisation, I conclude that the time could not have been earlier than the latter part of the Cretaceous period; it might not have been before the Eocene.

The forewings of the imago are very elongate, narrow, dilated posteriorly, and the legs are very long and unusually slender, with the outer tibial spurs almost as long as the inner, except in the *Agdistis* group and some species of *Pterophorus*. The general structure seems adapted to secure extreme lightness, thus enabling distribution to be effected by the wind without much effort on the part of the insect; hence the species need and possess very little muscular power, and are quite unable to fly against even a moderate breeze. The method of distribution has been effective, for the species have spread over the whole globe, including the principal oceanic islands; though the wide distribution of some cosmopolitan species is due to artificial introduction with the cultivated shrubs and trees on which the larvæ feed.

Ovum more or less oval, smooth. Larva rather short, with more or less developed fascicles of hairs; usually feeding exposed on flowers or leaves, but sometimes internally in stems or seedvessels. Pupa sometimes hairy, attached by tail, or in a slight cocoon above ground. The majority of those species whose foodplants are known are attached to the *Compositae*, which are the most highly organised group of Dicotyledonous plants, and this is especially true of the two largest genera, *Platyptilia* and *Pterophorus*, where the association with this order is very marked, probably nine-tenths of the species being attached to it. Most of the other known larvæ feed on Gamopetalous plants of not remote affinity and high organisation, such as *Labiatae* and *Gentianaceae;* none are known to be attached to Monocotyledons, or any of the more primitive groups of plants. I know no other family of insects in which this predilection for the plants of highest development is so marked; and it marks the family as one of comparatively recent origin.

The internal classification of the family presents no great difficulty, good characters for the delimitation of genera being afforded by the neuration, combined with the fissuring of the wings and the development of black scales in the dorsal cilia of hindwings. The last-mentioned character is however especially useful for specific distinction, small differences in the arrangement of the scales being strictly constant within the species; in view of this specific constancy, the habitual association of black pigment with sense-perception, and the absence of other apparent explanation, I am disposed to conjecture that these scale-tufts are some kind of sense-organ. The neural characters are often not easy of observation, owing to the tenuity of the wings, and there is some amount of specific variation, but very little individual variation, and the points selected have been foun very reliable. The only two genera that are difficult of separation are *Platyptilia* and *Stenoptilia*, which are so far connected by transitional forms that the line between them might be variously drawn, or they might even be united; but as these two genera represent the starting-points of the two lines of development of the cleft-winged genera, and as they can in practice be sufficiently recognised by the consideration of combined characters, I have preferred to keep them separate.

The genera fall naturally into the two groups of the cleft-winged and entire-winged forms respectively; but whilst it would be reasonable to expect the latter to be relatively the more primitive, this is not an admissible supposition, since they have lost vein 4 of the hindwings, which is normally present in the former group; hence the two groups must be regarded as collateral developments from a primary unknown form. The cleft-winged forms are represented by two parallel lines of development, proceeding in each case from broader-winged to narrower-winged forms, and from complete to reduced and simplified neuration, viz. the *Platyptilia* group terminating in *Diacrotricha,* and the *Stenoptilia* group terminating in *Alucita;* these are in general recognisable by the presence of black scales in the cilia of hindwings and bifid scales on the head in the former group, and their absence in the latter, but the distinction is not absolute. Probably all the principal genera originated in Asia, which shows much the

greatest diversity of generic forms; the great specific development of *Platyptilia* and *Pterophorus* in America would seem to be due to the large variety of station and abundant suitable foodplants (*Compositae*) offered, whilst the relatively insignificant generic modification indicates that the family did not find its way to America until long after its first origin. I infer therefore that it originated not only late in time, but at a period when Asia was comparatively isolated from other regions by wide seas, and that on eventually gaining access to the other continents it found them already well stocked with a large Lepidopterous fauna.

The genera may be tabulated as follows :

KEY OF THE GENERA

1. *Hindwings entire* . . . . . 2.
— *Hindwings trifid.* . . . . . 4.
2. *Forewings with 8 and 9 stalked* . . . . . 3.
— *Forewings with 8 and 9 separate* . . . . . 21. Genus AGDISTIS, Hübner.
3. *Hindwings with 3 and 5 stalked* . . . . . 20. Genus ATOMOPTERYX, Walsingham.
— *Hindwings with 3 and 5 separate.* . . . . . 19. Genus OCHYROTICA, Walsingham.
4. *Forewings quadrifid.* . . . . . 6. Genus HEPTALOBA, Walsingham.
— *Forewings not quadrifid* . . . . . 5.
5. *Forewings trifid* . . . . . 7. Genus DEUTEROCOPUS, Zeller.
— *Forewings bifid* . . . . . 6.
6. *Forewings with 9 absent* . . . . . 7.
— *Forewings with all costal veins present* . . . . . 17.
7. *Forewings with 3 absent* . . . . . 8.
— *Forewings with 3 present* . . . . . 11.
8. *Hindwings with very large scaletufts* . . . . . 10. Genus TITANOPTILUS, Hampson.
— *Hindwings with scaletufts very small or absent* . . . . . 9.
9. *Forewings with 8 absent* . . . . . 10.
— *Forewings with 8 present* . . . . . 2. Genus TRICHOPTILUS, Walsingham.
10. *Hindwings with 2 present* . . . . . 12. Genus ALUCITA, Linnæus.
— *Hindwings with 2 absent* . . . . . 1. Genus DIACROTRICHA, Zeller.
11. *Forewings with 10 out of 8 or 7* . . . . . 12.
— *Forewings with 10 separate* . . . . . 15. Genus PTEROPHORUS, Geoffroy.
12. *Forewings with 10 out of 7* . . . . . 13. Genus PSELNOPHORUS, Wallengren.
— *Forewings with 10 out of 8* . . . . . 13.
13. *Hindwings with 2 and 3 absent* . . . . . 8. Genus XYROPTILA, Meyrick.
— *Hindwings with 2 and 3 present* . . . . . 14.
14. *Hindwings with black scaletuft in dorsal cilia* . . . . . 5. Genus OXYPTILUS, Zeller.
— *Hindwings without black scaletuft.* . . . . . 15.
15. *Hindwings with orange scales in dorsal cilia* . . . . . 9. Genus KOREMAGUIA, Hampson.
— *Hindwings without orange scales in cilia.* . . . . . 16.
16. *Hindwings with 3 absent* . . . . . 14. Genus ADAINA, Tutt.
— *Hindwings with 3 present* . . . . . 16. Genus MARASMARCHA, Meyrick.
17. *Forewings with 11 out of 8* . . . . . 3. Genus TETRASCHALIS, Meyrick.
— *Forewings with 11 separate from 8* . . . . . 18.

18. *Forewings with 10 out of 8* . . . . . 5. Genus Oxyptilus, Zeller.
— *Forewings with 10 separate from 8* . . . . . 19.
19. *Forewings with 10 and 11 stalked or coincident*. . . . . 4. Genus Sphenarches, Meyrick.
— *Forewings with 10 and 11 separate* . . . . . 20.
20. *Forewings cleft from four-fifths or less* . . . . . 18. Genus Utuca, Walker.
— *Forewings cleft from three-fourths or more* . . . . . 21.
21. *Hindwings usually with black scales in dorsal cilia; forehead without horny cone* . . . . . 11. Genus Platyptilia, Hübner.
— *Hindwings without black scales in cilia; forehead often with horny cone* . . . . . 17. Genus Stenoptilia, Hübner.

GROUP A. — Hindwings trifid

Section I. — *Head with more or less developed bifid scales; hindwings usually with black scales in dorsal cilia; frenulum in ♀ usually simple.*

1. Genus DIACROTRICHA, Zeller

Diacrotricha. Zeller, Linn. Ent. Vol. 6, p. 399 (1851) — Type : *D. fasciola*, Zeller.
Cosmoclostis. Meyrick, Trans. Ent. Soc. Lond. p. 7 (1886) — Type : *D. aglaodesma*, Meyrick.

Characters. — Forehead without tuft; ocelli obsolete. Labial palpi moderately long, slender, with appressed scales, ascending, terminal joint almost as long as second, tolerably pointed. Tibiæ slightly thickened on origin of spurs. Forewings bifid, cleft from about one-third; no cell; 2 and 3 absent, 5 and 6 absent, 8 to 11 absent. Hindwings trifid, third segment without black scales in dorsal cilia; no cell; 2 and 3 absent, 5 and 6 absent, 8 coincident with 7 from beyond cleft.

Geographical distribution of species. — An extremely simplified development of the *Oxyptilus* type. Essentially Indo-Malayan.

1. *D. aglaodesma*, Meyrick, Trans. Ent. Soc. Lond. p. 12 (1886). — Plate, Fig. 1. — Ceylon, Solomons, E. Australia.
2. *D. auxileuca*, Meyrick, ibidem, p. 471 (1907). — India.
3. *D. quadriquadra*, Walsingham, Mon. Christm. Isl. p. 75 (1900). — Christmas Island.
4. *D. pesseuta*, Meyrick, Journ. Bombay Nat. Hist. Soc. p. 134 (1906). — Ceylon.
5. *D. fasciola*, Zeller, Linn. Ent. Vol. 6, p 399 (1851). — India, Ceylon, Java, New [Guinea.

2. Genus TRICHOPTILUS, Walsingham

Trichoptilus. Walsingham, Pteroph. Calif. p. 62 (1880) — Type : *T. pygmaeus*, Walsingham.
Buckleria. Tutt, Ent. Record, Vol. 17, p. 37 (1905) (undescribed). — Type : *T. paludum*, Zeller.

Characters. — Forehead without tuft; ocelli obsolete. Labial palpi moderate, ascending, second joint with scales tending to form a short angular apical tuft beneath, terminal joint short or long, filiform, tolerably pointed. Tibiæ somewhat thickened with scales on origin of spurs. Forewings bifid, cleft from before middle; 2 out of 4 or absent, 3 absent, 5 and 6 extremely short, 7 long, 9 absent,

10 absent or out of 8, 11 short, out of 8 near base or separate. Hindwings trifid, third segment usually with more or less developed black scales in dorsal cilia, often slight; 2 from middle of cell, 3 absent, 5 and 6 very short.

Geographical distribution of species. — Developed from *Oxyptilus* by reduction of veins. Wide-ranging in warmer regions, but probably Indo-Malayan in origin. The more primitive species show more developed black scale-tooth, and more complete neuration. Unfortunately I still do not know *T. pygmaeus*, of which the neuration has never been described, and am therefore uncertain of the correct application of the generic name.

1. *T. paludum*, Zeller, Isis. p. 866 (1841).	N. and C. Europe.
2. *T. paludicola*, Fletcher, Spolia Zeylanica, Vol. 5, Pt. 17, p. 20 (1907).	India, Ceylon.
3. *T. siceliota*, Zeller, Isis. p. 907 (1847).	S. Europe, Syria, N. Africa.
ononidis, Zeller, Linn. Ent. Vol. 6, p. 401 (1851).	
4. *T. scythrodes*, Meyrick, Trans. Ent. Soc. Lond. p. 13 (1886).	Australia.
5. *T. ceramodes*, Meyrick, ibidem, p. 14 (1886).	Australia.
6. *T. xerodes*, Meyrick, ibidem, p. 14 (1886). — **Plate, Fig. 2.**	Ceylon, New Guinea, Australia.
7. *T. Wahlbergi*, Zeller, Linn. Ent. Vol. 6, p. 346 (1851).	S. Africa, India, Ceylon, Australia.
rutilalis, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 943 (1864)	
pyrrhodes, Meyrick, Proc. Linn. Soc. N. S. Wales, p. 1113 (1889).	
8. *T. defectalis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 943 (1864).	W. and S. Africa.
9. *T. leptomeres*, Meyrick, Trans. Ent. Soc. Lond. p. 15 (1886).	Réunion.
10. *T. pelias*, Meyrick, ibidem, p. 472 (1907).	India.
11. *T. adelphodes*, Meyrick, ibidem, p. 266 (1887).	Australia.
12. *T. congrualis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 943 (1874).	S. and E. Africa, India, Ceylon, New Guinea, N. E. Australia, Hawaiia, North N. America, W. Indies.
oxydactylus, Walker, ibidem, p. 944 (1864).	
hawaiensis, Butler, Ann. Mag. Nat. Hist. p. 408 (1881).	
ochrodactylus, Fish, The Canad. Entom. Vol. 13, p. 142 (1881).	
centetes, Meyrick, Trans. Ent. Soc. Lond. p. 16 (1886).	
? *compsochares*, Meyrick, ibidem, p. 16 (1886).	
ralumensis, Pagenstecher, Zoologica, Vol. 29, p. 239 (1900).	
13. *T. pygmaeus*, Walsingham, Pteroph. Calif. p. 64, pl. 3, f. 15 (1880).	N. America.
14. *T. lobidactylus*, Fitch, Trans. New York Agr. Soc. Vol. 14, p. 547 (1854).	N. America.
californicus, Walsingham, Pteroph. Calif. p. 60, pl. 3, f. 9 (1880).	

3. Genus TETRASCHALIS, Meyrick

Tetraschalis. Meyrick, Trans. Ent. Soc. Lond. p. 267 (1887). — Type : *T. arachnodes*, Meyrick.

Characters. — Forehead without tuft; ocelli obsolete. Labial palpi moderately long, ascending, with appressed scales, terminal joint long, filiform. Tibiæ thickened with scales on origin of spurs. Forewings bifid, cleft from about middle; 2 and 4 stalked, 3 absent, 5 and 6 very short, 7 from below angle, long, 9, 10 and 11 out of 8. Hindwings trifid, third segment with tuft of black scales in dorsal cilia; 2 from middle of cell, 3 absent, 5 and 6 very short, 7 to apex.

Geographical distribution of species. — An attenuated development of *Oxyptilus*. Perhaps Papuan in origin.

1. *T. lemurodes*, Meyrick, Trans. Ent. Soc. Lond. p. 476 (1907). — **Plate, Fig. 8.**	New Guinea.
2. *T. ochrias*, Meyrick, ibidem, p. 475 (1907).	India, New Guinea.
3. *T. arachnodes*, Meyrick, ibidem, p. 267 (1887).	E. Australia.
4. *T. subtilis*, Rebel, Lep. Sokotra, p. 84 (1907).	Arabia, Sokotra.
5. *T. ischnites*, Meyrick, Trans. Ent. Soc. Lond. p. 474 (1907).	India.

4. Genus SPHENARCHES, Meyrick

Sphenarches. Meyrick, Trans. Ent. Soc. Lond. p. 8 (1886). — Type : *S. caffer,* Zeller.

Characters. — Forehead without tuft; ocelli obsolete. Labial palpi moderately long, ascending, second joint with scales hardly projecting beneath, terminal joint long, tolerably pointed. Tibiæ thickened with scales on origin of spurs. Forewings bifid, cleft from middle; 2 connate with 4..3 and 4 stalked, 5 and 6 very short, 7 from below angle, long, 8 and 9 stalked, 10 and 11 stalked or sometimes coincident. Hindwings trifid, third segment with tuft of black scales in dorsal cilia; 2 from middle of cell, 3 absent, 5 and 6 very short, 7 to apex.

Geographical distribution of species. — The single species is related to *Oxyptilus*, and now very widely distributed.

1. *S. caffer,* Zeller, Linn. Ent. Vol. 6. p. 348 (1851). — **Pl., Fig. 3.** Africa, India, Ceylon, Java, Philippines, E. Australia, New Hebrides, Tonga, W. Indies.
   anisodactylus, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 934 (1864).
   diffusalis, Walker, ibidem, p. 945 (1864).
   Walkeri, Walsingham, Trans. Ent. Soc. Lond. p. 279 (1881).
   synophrys, Meyrick, ibidem, p. 17 (1886).

5. Genus OXYPTILUS, Zeller

Oxyptilus. Zeller, Isis, Vol. 10, p. 765 (1841). — Type : *O. pilosellae*, Zeller.
Capperia. Tutt, Ent. Record, Vol. 17, p. 37 (1905) (undescribed). — Type : *O. heterodactylus*, Villiers.
Geina. Tutt, Brit. Lep. Vol. 5, p. 411 (1906). — Type : *O. didactylus,* Linnæus.
Crombrugghia. Tutt, ibidem, p. 449 (1906). — Type : *O. distans,* Zeller.

Characters. — Forehead smooth or with small tuft; ocelli obsolete. Labial palpi moderate, ascending, second joint with scales sometimes projecting or forming a short angular apical tuft, terminal joint moderately long, more or less pointed or acute. Tibiæ thickened with scales on origin of spurs. Forewings bifid, cleft from about middle; 2 and 4 connate, 3 and 4 stalked, 5 and 6 very short, 7 from below angle, long, 9 and 10 out of 8 or 9 sometimes coincident with 8, 11 separate. Hindwings trifid, third segment with well-developed tuft of black scales in dorsal cilia; 2 from middle of cell, 3 from near angle, short, 5 and 6 very short, 7 to apex.

Geographical distribution of species. — Closely related to the highest forms of *Platyptilia*. Nearly cosmopolitan in range, but mainly European and Indo-Malayan. The European and North American species however all belong to one closely allied group, whilst the Indo-Malayan species display great diversity, and it would seem probable that the genus is Indo-Malayan in origin.

1. *O. zanclistes*, Meyrick, Journ. Bombay Nat. Hist. Soc. p. 581 (1905). India, Ceylon.
2. *O. epidectes*, Meyrick, Trans. Ent. Soc. Lond. p. 476 (1907). India, Ceylon, Mauritius.
3. *O. cinctipedalis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 935 (1864). E. Australia.
4. *O. idonealis*, Walker, ibidem, p. 935 (1864). Borneo.
5. *O. pelecyntes*, Meyrick, Trans. Ent. Soc. Lond. p. 477 (1907). India. [Africa.
6. *O. laetus*, Zeller, Isis, p. 903 (1847). S. Europe, W. Asia, N.
7. *O. distans*, Zeller, ibidem, p. 902 (1847). C. and S. Europe, W. Asia.
   laetidactylus, Bruand, Ann. Soc. Ent. Fr. p. 34, pl. 2, f. 7 (1861).
8. *O. lantoscanus*, Millière, Ann. Soc. Linn. Lyon, p. 176, t. 4, f. 8 (1883). S. Europe.
9. *O. Kollari*, Stainton, Cat. Brit. Tineidæ and Pteroph. p. 28 (1849). E. C. Europe, W. C. Asia.
10. *O. tristis*, Zeller, Isis, p. 788 (1841). C. Europe.
11. *O. pilosellae*, Zeller, ibidem, t. 4, f. 27 (1841). Europe, W. C. Asia.

12. *O. ericetorum*, Zeller, Linn. Ent. Vol. 6, p. 352 (1851). — C. and S. E. Europe.
13. *O. maculatus*, Constant, Ann. Soc. Ent. Fr. p. 193, t. 7, f. 9 (1865). — C. Europe.
14. *O. hieracii*, Zeller, Isis, p. 827, t. 4, f. 20-24 (1841). — Europe.
15. *O. heterodactylus*, Villiers, Linn. Ent. Vol. 2, p. 535 (1789). — C. Europe.
    teucrii, Jordan, Ent. M. Mag. Vol. 6, p. 14 (1869).
    Celeusi, Frey, Stett. Ent. Zeit. p. 18 (1886).
    loranus, Fuchs, ibidem, p. 48 (1895).
16. *O. geodactylus*, Fuchs, ibidem, Vol. 64, p. 15 (1903). — W. C. Asia.
17. *O. leonuri*, Stange, ibidem, p. 514 (1882). — C. Europe.
18. *O. parvidactylus*, Haworth, Lep. Brit. p. 480 (1811). — Europe, W. C. Asia.
    microdactylus, Stephens, Ill. Brit. Ent. Vol. 4, p. 377 (1835).
    obscurus, Zeller, Isis, p. 793, t. 4, f. 25-26 (1841).
19. *O. marginellus*, Zeller, ibidem, p. 903 (1847). — S. Europe, Asia Minor.
    Hofmannseggii, Möschler, Berl. Ent. Zeitschr. p. 145 (1866).
20. *O. Bohemanni*, Wallengren, Skand. Fjädermott. p. 16 (1859). — N. Europe.
21. *O. nanellus*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 933 (1864). — S. America.
22. *O. languidus*, Felder, Reise Novara, Lep. Het. pl. 140, f. 47 (1877). — S. America.
23. *O. periscelidactylus*, Fitch, Trans. New York Agr. Soc. Vol. 14, p. 843 (1854). — N. America.
24. *O. delawaricus*, Zeller, Verh. Zool.-bot. Ges. Wien, Vol. 5, p. 318 (1873). — N. America.
25. *O. ningoris*, Walsingham, Pteroph. Calif. p. 26, pl. 2, f. 6 (1880). — N. America.
26. *O. tenuidactylus*, Fitch, Trans. New York Agr. Soc. Vol. 14, p. 848 (1854). — N. America.
    nigrociliatus, Zeller, Verh. Zool.-bot. Ges. Wien, Vol. 5, p. 322 (1873).
27. *O. raptor*, Meyrick, Trans. Ent. Soc. Lond. p. 478 (1907). — N. America.
28. *O. didactylus*, Linnæus, Fauna Suecica, n. 1453 (1761). — Europe, Asia Minor.
    trichodactylus, Hübner, Samml. Europ. Schmett. f. 18 (1825).
    brunneodactylus, Millière, Ann. Soc. Ent. Fr. p. 66, t. 3, f. 6 (1854).
29. *O. regulus*, Meyrick, Journ. Bombay Nat. Hist. Soc. p. 135 (1906). — India, Ceylon. — **Plate, Fig. 6.**
30. *O. causodes*, Meyrick, ibidem, p. 582 (1905). — India, Ceylon.

6. Genus HEPTALOBA, Walsingham

Heptaloba. Walsingham, Ent. M. Mag. Vol. 21, p. 175 (1885). — Type : *H. argyriodactyla*, Walker.

Characters. — Forehead with short scale-projection beneath each antenna; ocelli obsolete. Labial palpi long, curved, ascending, scales of second joint slightly expanded towards apex, terminal joint rather shorter than second, tolerably pointed. Tibiæ much expanded with scales on origin of spurs. Forewings quadrifid, cleft firstly from two-fifths, and then each segment cleft from before its middle; 2 and 4 connate, running into two lowest segments, 3 absent, 5 and 6 obsolete, 7 from below angle, running into second segment, 8 and 9 stalked, 10 and 11 separate. Hindwings trifid, third segment with tuft of black scales in dorsal cilia; 2 from middle of cell, 3 absent, 7 to apex.

Geographical distribution of species. — Perhaps a derivative of *Deuterocopus*. Apparently restricted to Ceylon, but an undescribed form with quadrifid forewings occurs in Central America.

1. *H. argyriodactyla*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 929 (1864). Ceylon. — **Plate, Fig. 4.**

7. Genus DEUTEROCOPUS, Zeller

Deuterocopus. Zeller, Linn. Ent. Vol. 6, p. 402 (1852). — Type : *D. Tengstroemi*, Zeller.

Characters. — Forehead without tuft; ocelli obsolete. Labial palpi moderate, ascending, second joint with appressed scales, terminal joint moderate, pointed. Tibiæ thickened on origin of spurs with

whorls of scales. Forewings trifid, cleft centrally from about middle and lower segment cleft again from about or before its middle; 2 from before angle, 3 and 4 connate, 5 and 6 very short, 7 from below angle, long, 8 and 9 stalked, 10 and 11 separate. Hindwings trifid, third segment short, terminating in a more or less developed tuft of black scales; 2 from middle of cell, 3 absent, 5 and 6 very short, 7 to apex.

Geographical distribution of species. — Correlated with *Xyroptila* as a derivative of *Platyptilia*. Indo-Malayan and Papuan, but some of the species range very widely.

1. *D. rubrodactylus*, Pagenstecher, Zoologica, Vol. 29, p. 241 (1900).	New Guinea.
2. *D. socotranus*, Rebel, Lep. Sokotra, p. 85, f. 37 (1907).	India, Ceylon, Sokotra.
3. *D. planeta*, Meyrick, Trans. Ent. Soc. Lond. p. 473 (1907). — **Pl., Fig. 5.**	India.
4. *D. Ritsemae*, Walsingham, Notes Leyd. Mus. Vol. 6, p. 243 (1884).	Java.
5. *D. Tengstroemi*, Zeller, Linn. Ent. Vol. 6, p. 402 (1852).	Java.
6. *D. famulus*, Meyrick, Trans. Ent. Soc. Lond. p. 474 (1907).	New Guinea.

8. Genus XYROPTILA, Meyrick

Xyroptila. Meyrick, Trans. Ent. Soc. Lond. p. 479 (1908). — Type : *X. oenophanes*, Meyrick.

Characters. — Forehead without tuft; ocelli obsolete. Labial palpi moderately long, slender, curved, smooth, terminal joint somewhat longer than second, acute. Tibiæ with small whorls of scales at origin of spurs. Forewings bifid, cleft from about three-fifths; 2 from middle of cell, 3 and 4 connate, 5 and 6 very short, 7 from near 8, long, 9 absent, 8 and 10 stalked, 11 separate. Hindwings trifid, third segment with or without small black anteapical scaletuft in cilia; 2 and 3 absent, 5 and 6 very short, 7 to apex.

Geographical distribution of species. — A specialised development of *Platyptilia*, exceptional amongst its near allies in being usually without black scales in cilia of hindwings. Indian and Australian.

1. *X. marmarias*, Meyrick, Trans. Ent. Soc. Lond. p. 480 (1907). — **Plate, Fig. 7.**	E. Australia.
2. *X. oenophanes*, Meyrick, ibidem, p. 480 (1907).	India.
3. *X. peltastes*, Meyrick, ibidem, p. 479 (1907).	E. Australia.
4. *X. caminites*, Meyrick, ibidem, p. 478 (1907).	India.

9. Genus KOREMAGUIA, Hampson

Koremaguia, Hampson, Ill. Lep. Het. Brit. Mus. Vol. 8, p. 142 (1891). — Type : *K. alticola*, Felder.

Characters. — Forehead without tuft; ocelli obolete. Labial palpi moderately long, ascending, with appressed scales, terminal joint long, pointed. Tibiæ thickened with scales, with expansible tuft on origin of spurs. Forewings bifid, cleft from two-thirds; 2 from rather near angle, 3 very near angle, 7 long, 8 and 10 stalked, 9 absent. Hindwings trifid, third segment with orange scales in dorsal cilia; 2 from middle of cell, 3 from near angle, 7 to apex.

Geographical distribution of species. — A development of *Platyptilia*. Apparently restricted to the Indian region.

1. *K. alticola*, Felder, Reise Novara, Lep. Het. pl. 140, f. 59 (1877).	India.
aurantidactyla, Hampson, Ill. Lep. Het. Brit. Mus. Vol. 8, p. 142, pl. 156, f. 20 (1891).	

10. Genus TITANOPTILUS, Hampson

Titanoptilus, Hampson, Trans. Ent. Soc. Lond. p. 248 (1905). — Type : *T. melanodonta*, Hampson.

Characters. — Forehead without tuft. Basal joint of antennæ with tuft of scales anteriorly. Labial palpi moderate, porrected, with appressed scales. Tibiæ tufted with scales. Forewings bifid, cleft from three-fifths; 2 from near middle, 3 absent, 5 and 6 obsolete (?), 7 long, 8 and 10 stalked, 9 absent, 11 separate. Hindwings trifid, third segment with strong black scaletufts in dorsal cilia; 2 from near middle of cell, 3 absent, 5 and 6 obsolete, 7 to apex.

Geographical distribution of species. — Probably a development of *Platyptilia*. The neuration of forewings is differently stated by Hampson, but I think misinterpreted by him, though I am unable to make a thorough examination of the unique type-specimen.

1. *T. melanodonta,* Hampson, Trans. Ent Soc. Lond. p. 249 (1905). E. Africa.

11. Genus PLATYPTILIA, Hübner

Platyptilia, Hübner, Verz. bek. Schmett. p. 429 (1826) (= **Platyptilus,** Zeller). — Type : *P. gonodactyla*, Schiffermüller.

Amblyptilia, Hübner, ibidem, p. 430 (1826). — Type : *P. acanthodactyla*, Hübner.

Cnæmidophorus, Wallengren, Skand. Fjädermott. (1859). — Type : *P. rhododactyla,* Fabricius.

Sochchora, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 952 (1864). — Type : *P. donatella,* Walker.

Eucnæmidophorus, Wallengren, Ent. Tidssk. Vol. 2, p. 96 (1881). — Type : *P. rhododactyla,* Fabricius.

Gilbertia, Walsingham, Ent. Mag. Vol. 27, p. 259 (1891). — Type *P. eques*, Walsingham.

Crocydoscelus, Walsingham, Trans. Ent. Soc. Lond. p. 35 (1897). —Type : *P. ferruginea,* Walsingham.

Gillmeria, Tutt, Ent. Record, Vol. 17, p. 37 (1905) (undescribed). — Type : *P. ochrodactyla,* Schiffermüller.

Fredericina, Tutt, ibidem, p. 37 (1905) (undescribed). — Type : *P. Zetterstedtii*, Zeller.

Characters. — Forehead usually with tuft of scales; ocelli obsolete. Labial palpi rather long, obliquely ascending, second joint more or less loosely scaled, terminal joint usually rather long, slender. Tibiæ sometimes thickened or tufted on origin of spurs and centre of middle pair. Forewings bifid, cleft from two-thirds to three-fourths; 2 from considerably before angle, 3 from very near angle, 5 and 6 short, 7 from below angle, 8 and 9 stalked, 10 and 11 separate. Hindwings trifid, third segment with black scales in dorsal cilia, sometimes barely traceable; 2 from middle of cell, 3 from near angle, 5 and 6 short, 7 und 8 divergent beyond cleft.

Geographical distribution of species. — This extensive genus is quite cosmopolitan. It is closely correlated to *Stenoptilia*, so much so that in certain forms the two genera are difficult to distinguish, but as the two types are really quite distinct and in general easily separable on a comparison of all the characters, it is desirable to keep them separate. The species also require close study for discrimination; the most important point is the nature and position of the black scales in the dorsal cilia of hind wings, and this is used as the leading character in the following arrangement. The most primitive species are those in which these scales are very slightly developed. The following division into groups seems natural :

1. *Third segment of hindwings very short, hardly passing first cleft* . . . . . Section A.
— *Third segment of hindwings of normal length.* . . . . . 2.
3. *Dorsal scaletooth of hindwings well-developed.* . . . . . 3.

— *Dorsal scaletooth of hindwings slight or almost obsolete* . . . . . Section D.
3. *Dorsal scaletooth well beyond middle* . . . . . Section B.
— *Dorsal scaletooth nearly central*. . . . . Section C.

SECTION *A*

1. *P. ferruginea,* Walsingham, Trans. Ent. Soc. Lond. p. 35. pl. 2, f. 1 (1897). W. Africa.
2. *P. ignifera*, Meyrick, ibidem, p. 481 (1907). India.
3. *P. umbrigeralis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 942 (1864). S. America.
4. *P. donatella*, Walker, ibidem, p. 952 (1864). S. America.
5. *P. atrodactyla,* Pagenstecher, Zoologica, Vol. 29, p. 239 (1900). Bismarck Islands.
6. *P. citropleura*, Meyrick, Trans. Ent. Soc. Lond. p. 482 (1907). India, Ceylon.
7. *P. taprobanes*, Felder, Reise Novara, Lep. Het. pl. 139, f. 54 (1877). India, Ceylon, Java.
   Sythoffi, Snellen, Tijdschr. v. Ent. Vol. 46, p. 54, pl. 5, f. 15, 16 (1903).
8. *P. charitopa*, Meyrick, Trans. Ent. Soc. Lond. p. 483 (1907). S. America.
9. *P. pusillidactyla*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 933 (1864). India, Ceylon, Réunion, W. Indies.
   tecnidion, Zeller, Hor. Soc. Ent. Ross. p. 468, pl. 6, f. 162 (1877).
   hemimetra, Meyrick, Trans. Ent. Soc. Lond. p. 18 (1886).
10. *P. æques*, Walsingham, Ent. M. Mag. Vol. 27, p. 259 (1891). W. Africa.
11. *P. rhododactyla*, Schiffermüller, Syst. Verz. Schmett. Wien. Gegend p. 146 (1776). N. and C. Europe, Asia Minor.

SECTION *B*

12. *P. capnodactyla,* Zeller, Isis, p. 774 (1841). S. E. Europe.
13. *P. brevipennis,* Zeller, Verh. Zool.-bot. Ges. Wien, p. 442, pl. 12, f. 12 (1874). S. America.
14. *P. Edwardsii,* Fish, The Canad. Entom. Vol. 13, f. 72 (1881). N. America.
15. *P. terminalis*, Erschoff, Hor. Soc. Ent. Ross. p. 347 (1877). E. Siberia.
16. *P. brachymorpha,* Meyrick, Trans. Ent. Soc. Lond. p. 240 (1888). S. Africa, Syria, India, Ceylon, Hawaiian Islands.
   Seeboldi, Hofmann, Iris. Vol. 11, p. 33 (1898).
17. *P. paraglyptis*, Meyrick, Trans. Ent. Soc. Lond. p. 484 (1907). S. America.
18. *P. nubila*, Felder, Reise Novara, Lep. Het. pl. 140, f. 53 (1877). S. America.
19. *P. pusilla*, Philippi, Linn. Ent. Vol. 14, p. 296 (1864). S. America.
20. *P. gilvicolor*, Zeller, Hor. Soc. Ent. Ross. p. 462, pl. 6, f. 160 (1877). S. America.
21. *P. epidelta,* Meyrick, Trans. Ent. Soc. Lond. p. 486 (1907). S. America.
22. *P.? sematodactyla,* Berg, An. Soc. Cient. Argent. Vol. 19, p. 283 (1892). S. America.
23. *P.? pelodactyla*, Berg, ibidem, p. 284 (1892). S. America.
24. *P. fuscicornis*, Zeller, Hor. Soc. Ent. Ross. p. 460 (1877). S. America, Hawaiian Isl.
25. *P. postica,* Felder, Reise Novara, Lep. Het. pl. 140, f. 51 (1877). S. America.
26. *P. sordipennis,* Zeller, Hor. Soc. Ent. Ross. p. 466 (1877). S. America.
27. *P. littoralis*, Butler, Trans. Ent. Soc. Lond. p. 44 (1882). Hawaiian Islands.
28. *P. insularis*, Walsingham, Fauna Hawaii. Vol. 1, p. 475, pl. 10, f. 7 (1907). Hawaiian Islands.
29. *P. rhynchophora*, Meyrick, Trans. Ent. Soc. Lond. p. 239 (1888). Hawaiian Islands.
30. *P. scutellaris*, Felder, Reise Novara, Lep. Het. pl. 140, f. 57 (1877). S. America.
31. *P. isoterma*, Meyrick, Trans. New Zeal. Inst. (1907). New Zealand.
32. *P. heliastis*, Meyrick, ibidem, p. 129 (1884). New Zealand.
33. *P. falcatalis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 931 (1864). New Zealand.
   repletalis Walker, ibidem, p. 931 (1864).
34. *P. Metzneri,* Zeller, Isis, p. 783 (1841). S. E. Europe, Asia Minor, E. Siberia.
   Bollii, Frey, Tineid. und Pteroph. Schweiz, p. 403 (1856).
35. *P. exaltata,* Zeller, Stett. Ent. Zeit. p. 411 (1867). India.
36. *P. forcipata*, Zeller, ibidem, p. 412, pl. 2, f. 7 (1867). India.
37. *P. punctidactyla*, Haworth, Lep. Brit. p. 479 (1811). Europe, N. America, Japan.
   cosmodactyla, Hübner, Samml. Eur. Schmett. p. 35, 36 (1825).
   ulodactyla, Zetterstedt, Ins. Lappon. p. 1012 (1840).
   stachydalis, Frey, Mitth. Schweiz. Ent. Ges. Vol. 3, p. 290 (1870).

38. *P. direptalis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 934 (1864). — **Plate, Fig. 10.** — S. and W. Africa, India, Ceylon.

39. *P. acanthodactyla*, Hübner, Samml. Europ. Schmett. f. 23, 24 (1825). — Europe, N. Africa, S. W. Asia, N. America.
calodactyla, Fabricius, Mant. Ins. Vol. 2, p. 258 (1787).
tetralicella, Hofmann, Ber. Naturw. Ver. Regensb. p. 62 (1895).
calaminthae, Frey, Stett. Ent. Zeit. p. 62 (1886).

40. *P. moerens*, Snellen, Tijdschr. v. Ent. Vol. 27, p. 182, pl. 10, f. 3 (1884). — E. Siberia.

41. *P. molopias*, Meyrick, Journ. Bombay Nat. Hist. Soc. p. 135 (1906). — India, Ceylon.

42. *P. marmarodactyla*, Dyar, Proc. Ent. Soc. Wash. Vol. 5, p. 296 (1903). — N. America.

43. *P. pica*, Walsingham, Pteroph. Calif. p. 21, pl. 2, 1 (1880). — N. America.

SECTION *C*

44. *P. nemoralis*, Zeller, Isis, p. 778 (1841). — E. Europe.
saracenica, Wocke, Cat. Eur. Lep. no. 3127*a* (1870).
isoductyla, de Graaf, Tijdschr. v. Ent. p. 71 (1868).
Grafii, Zeller, Stett. Ent. Zeit. p. 139 (1873).

45. *P. carduidactyla*, Riley, Rep. Ins. Miss. p. 180, pl. 2, f. 13, 14 (1869). — N. America.

46. *P. calodactyla*, Schiffermüller, Syst. Verz. Schmett. Wien. Gegend, p. 146 (1776). — Europe.
petradactyla, Hübner, Samml. Europ. Schmett. f. 37, 38 (1825).
tesseradactyla, Zetterstedt, Ins. Lappon. p. 1012 (1840).
Zetterstedtii, Zeller, Isis, p. 777, pl. 4, f. 3, 4 (1841).
nemoralis, Herrich-Schäffer, Syst. Bearb. Schmett. Europ. f. 7 (1855).
taeniadactyla, South, The Entomologist, Vol. 15, p. 34 (1882).

47. *P. tesseradactyla*, Linnæus, Fauna Suec. no. 1454 (1761). — Europe, W. C. Asia, N. America.
Fischeri, Zeller, Isis, p. 781 (1841).

48. *P. leucorrhyncha*, Meyrick, Ent. M. Mag. Vol. 38, p. 217 (1902). — C. Europe.

49. *P. gonodactyla*, Schiffermüller, Syst. Verz. Schmett. Wien. Gegend, p. 320 (1776). — Europe, Asia Minor.
megadactyla, Hübner, Samml. Europ. Schmett. f. 6 (1825).
trigonodactyla, Haworth, Lep. Brit. p. 478 (1811).
tesseradactyla, Treitschke, Schmett. Eur. Vol. 9 (2), p. 230 (1833).

50. *P. farfarella*, Zeller, Stett. Ent. Zeit. p. 334 (1867). — C. Europe.

51. *P. aeolodes*, Meyrick, Trans. Ent. Soc. Lond. p. 278 (1902). — New Zealand.

52. *P. isodactyla*, Zeller, Linn. Ent. Vol. 6, p. 328 (1852). — C. Europe.
monodactyla, Haworth, Lep. Brit. p. 476 (1811).
similidactyla, Stephens, Ill. Brit. Ent. Vol. 4, p. 375 (1835).

53. *P. percnodactyla*, Walsingham, Pteroph. Calif. p. 8, pl. 1, f. 7 (1880). — N. America.

54. *P. orthocarpi*, Walsingham, ibidem, p. 2, pl. 1, f. 9 (1880). — N. America.

55. *P. rhusiodactyla*, Fuchs, Stett. Ent. Zeit. Vol. 64, p. 14 (1903). — W. C Asia.

SECTION *D*

56. *P. caesia*, Snellen, Tijdschr. v. Ent. Vol. 27, p. 189, pl. 10, f. 6 (1884). — E. Siberia.

57. *P. Hedemanni*, Snellen, ibidem, p. 184, pl. 10, f. 4 (1884). — E. Siberia.

58. *P. vacillans*, Snellen, ibidem, p. 187, pl. 10, f. 5 (1884). — E. Siberia.

59. *P. luteocinerea*, Snellen, ibidem, p. 191, pl. 10, f. 7 (1884). — E. Siberia.

60. *P. fragilis*, Walsingham, Pteroph. Calif. p. 16, pl. 1, f. 12 (1880). — N. America.

61. *P. albidorsella*, Walsingham, ibidem, p. 13, pl. 1, f. 10 (1880). — N. America.

62. *P. shastae*, Walsingham, ibidem, p. 14, pl. 1, f. 2 (1880). — N. America.

63. *P. albida*, Walsingham, ibidem, p. 10, pl. 1, f. 8 (1880). — N. America.

64. *P. albicans*, Fish, The Canad. Entom. Vol. 13, p. 72 (1881). — N. America.

65. *P. ochrodactyla*, Schiffermüller, Syst. Verz. Schmett. Wien. Gegend, p. 145 (1776). — N. and C. Europe, Asia Minor.
dichrodactylus, Mühlig, Stett. Ent. Zeit. p. 213 (1863).
Borgmanni, Rössler, Jahrb. Nass. Ver. p. 220 (1881).

66. *P. pallidactyla*, Haworth, Lep. Brit. p. 478 (1811). — Europe, N. America.
marginidactylus, Fitch, Trans. New York Agr. Soc. Vol. 14, p. 848 (1854).
nebulaedactylus, Fitch, ibidem, p. 849 (1854).
Bertrami, Rössl. Wien. Ent. Mon. p 54 (1864).
Bischoffi, Zeller, Stett. Ent. Zeit. p. 333 (1867).
cervinidactylus, Packard, Ann. Lyc. New York, p. 266 (1873).
67. *P. grandis*, Walsingham, Pterop. Calif. Vol. 6, pl. 1, f. 5 (1880). — N. America.
68. *P. Cooleyi*, Fernald, Pterop. N. Amer. p. 30 (1898). — N. America.
69. *P. cinnamomea*, Staudinger, Berl. Ent. Zeitschr. p. 326 (1870). — S. E. Europe.
70. *P. asiatica*, Rebel, Iris, Vol. 15, p. 108 (1902). — C. Asia.
71. *P. cretalis*, Meyrick, Trans. Ent. Soc. Lond. p. 487 (1907). — Japan.
72. *P. pyrrhina*, Zeller, Hor. Soc. Ent. Ross. p. 464, pl. 6, f. 161 (1877). — S. America.
73. *P. stigmatica*, Felder, Reise Novara, Lep. Het. pl. 140, f. 55 (1877). — S. America.
74. *P. emissalis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p 930 (1864). — E. Australia, Tasmania.
75. *P. deprivatalis*, Walker, ibidem, p. 946 (1864). — New Zealand.
Haasti, Felder, Reise Novara, Lep. Het. pl. 140, f. 58 (1877).
76. *P. campsiptera*, Meyrick, Trans. New Zeal. Inst. p. 113 (1906). — New Zealand.
77. *P. vigens*, Felder, Reise Novara, Lep. Het. pl. 140, f. 49 (1877). — New Zealand.
78. *P. sabia*, Felder, ibidem, pl. 140, f. 60 (1877). — S. Africa.
africae, Walsingham, Trans. Ent. Soc. Lond. p. 278, pl. 13, f. 45 (1881).
79. *P. empedota*, Meyrick, Trans. Ent. Soc. Lond. p. 487 (1907). — S. Africa.
80. *P. albiciliata*, Walsingham, Pter. Cal. p. 17, pl. 1, f. 13 (1880). — N. America.
81. *P. adusta*, Walsingham, ibidem, p. 5, pl. 1, f. 4 (1880). — N. America.
82. *P. xylopsamma*, Meyrick, Trans. Ent. Soc. Lond. p. 488 (1907). — N. America.
83. *P. modesta*, Walsingham, Pter. Cal. p. 18, pl. 1, f. 14 (1880). — N. America.
84. *P. Chapmani*, Tutt, Ent. Record, Vol. 8, p. 293 (1896). — N. Europe.
85. *P. petrodactyla*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 940 (1864). — Canada.
86. *P. epotis*, Meyrick, Trans. Ent. Soc. Lond. p. 231 (1905). — New Zealand.

SECTION II. — *Head rarely with bifid scales; hindwings usually without black scales in dorsal cilia, never with defined tufts, frenulum in ♀ usually double.*

12. GENUS ALUCITA, LINNÆUS

Alucita. Linnæus, Syst. Nat. Vol. 1, p. 542 (1758). — Type : *A. pentadactyla*, Linnæus.

Aciptilia. Hübner, Verz. bek. Schmett. p. 430 (1826) (= **Aciptilus**, Zeller). — Type : *A. pentadactyla*, Linnæus.

Merrifieldia. Tutt, Ent. Record. Vol. 17, p. 37 (1905) (undescribed).—Type : *A. tetradactyla*, Linnæus.

Porrittia. Tutt, ibidem, p. 37 (1905) (undescribed). — Type : *A. galactodactyla*, Hübner.

Wheeleria. Tutt, ibidem, p. 37 (1905) (undescripted). — Type : *spilodactyla*, Curtis.

Characters. — Forehead without tuft, seldom with horny prominence; ocelli obsolete. Labial palpi moderate, more or less ascendig, filiform, second joint sometimes loosely scaled, terminal acute. Tibiæ simple. Forewings bifid, cleft from about middle; 2 from near angle or out of 4 or absent, 3 absent, 5 and 6 very short, 8-10 absent, 11 near or out of 7 or absent. Hidwings trifid, third segment without black scales in dorsal cilia; 2 from middle of cell, 3 absent, 5 and 6 very short, 7 to apex.

Geographical distribution of species. — Developed from *Pterophorus* by reduction of veins. The home of the genus would seem to be round the shores of the Mediterranean, where twenty-eight

out of the fifty-one species are found; some of the other species range very widely, and the genus has spread through Africa, by way of Europe to North America, and through the Malay Archipelago to New Zealand, where there are four indigenous species; in Australia there are no indigenous species, but two from the islands have effected a lodgement; from South America the genus is unknown.

1. *A. melanopoda*, Fletcher, The Entomologist, p. 284 (1907).	Ceylon, India.
2. *A. lacteipennis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 949 (1864).	Burma, Borneo, New Guinea, N. E. Australia.
3. *A. similalis*, Walker, ibidem, p. 949 (1864).	W. Africa, Malacca, Borneo, Celebes.
malacensis, Zeller, Hor. Soc. Ent. Ross. p. 485 (1877).	
4. *A. rhyparias*, Meyrick, Trans. Ent. Soc. Lond. p. 489 (1907).	S. Africa.
5. *A. elaeopa*, Meyrick, ibidem, p. 490 (1907). — **Plate, Fig. 11.**	India.
6. *A. candidalis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 948 (1864).	S. and W. Africa, India to New Guinea, N. E. Australia.
leucadactyla, Walker, ibidem, p. 949 (1864).	
7. *A. niveodactyla*, Pagenstecher, Zoologica, Vol. 29, p. 240 (1900).	India to Bismarck Islands.
nivea, Snellen, Tijdschr. v. Ent. Vol 46, p. 56, pl. 5, f. 17 (1903).	
8. *A. albida*, Zeller, Linn. Ent. Vol. 6, p. 397 (1851).	S. Africa.
9. *A. aptalie*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 950 (1864).	E. Australia, Fiji, Samoa, New
10. *A. monospilalis*, Walker, ibidem, p. 950 (1864).	New Zealand. [Hebrides.
patruelis, Felder, Reise Novara, Lep. Het. pl. 140, f. 56 (1877).	
11. *A. lycosema*, Meyrick, Trans. New Zeal. Inst. p. 124 (1884).	New Zealand.
12. *A. furcatalis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 950 (1864).	New Zealand.
13. *A. montana*, Walsingham, Pteroph. Calif. p. 59, pl. 3, f. 14 (1880).	N. America.
14. *A. Walsinghami*, Fernald, Pteroph. Calif. N. Amer. p. 36 (1898).	N. America.
15. *A. Belfragei*, Fish, The Canad. Entom. Vol. 13, p. 142 (1881).	N. America.
16. *A. volgensis*, Möschler, Wien. Ent. Mon. p. 143, pl. 1, f. 16 (1862).	S. E. Europe.
17. *A. spilodactyla*, Curtis, Brit. Ent. Vol. 4, p. 161 (1828).	C. and S. Europe, W.C. Asia, N. Africa.
obsoleta, Zeller, Isis, p. 859 (1841).	
confusa, Herrich-Schäffer, Syst. Bearb. Schmett. Europ. Vol. 5, p. 384 (1855).	
xerodactyla, Herrich-Schäffer, ibidem, p. 34 (1855).	
18. *A. nephelodactyla*, Eversmann, Fauna Ent. Volgo-Ural. Exhib. Lepid. Spec. p 609 (1844).	S. E. Europe.
? *phlomidis*, Staudinger, Hor. Soc. Ent. Ross. Vol. 7, p. 281, pl. 3, f. 19 (1867).	
19. *A. pentadactyla*, Linnæus, Syst. Nat. ed. 10, p. 542 (1758).	Europe, Asia Minor, Siberia.
20. *A. parthica*, Lederer, Hor. Soc. Ent. Ross. Vol. 8, p. 27, pl. 2, f. 16 (1868).	W. C. Asia.
21. *A. semiodactyla*, Mann, Verh. Zool.-bot. Ges. Wien, p. 42 (1855).	S. Europe.
22. *A. bystropogonis*, Walsingham, Proc. Zool. Soc. Lond. p. 915, pl. 51, f. 2 (1907).	Canary Islands.
23. *A. adamas*, Constant, Bull. Soc Ent. Fr. p. 54 (1895).	S. Europe.
24. *A. desertorum*, Zeller, Stett. Ent. Zeit. p. 386 (1867).	S. W. Asia.
25. *A. ischnodactyla*, Treitschke, Schmett. Eur. Vol. 10 (3), p. 222 (1835).	S. Europe, Asia Minor.
actinodactyla, Chrétien, Le Naturaliste, p. 99 (1891).	
26. *A. apollina*, Millière, Ann. Soc. Linn. Lyon, p. 177, pl. 4, f. 9 (1883).	S. Europe.
27. *A. caspia*, Lederer, Hor. Soc. Ent. Ross. Vol. 8, p. 26, pl. 2, f. 15 (1868).	W. C. Asia.
28. *A. raphiodactyla*, Rebel, Iris, Vol. 13, p. 188 (1900).	S. Europe.
29. *A. baliodactyla*, Zeller, Isis, p. 861 (1841).	C. and S. Europe, C. Asia.
tridactylus, Stephens, Ill. Brit Ent. Vol. 4, p. 373 (1835).	
meridionalis, Staudinger, Hor. Soc. Ent. Ross. Vol. 15, p. 432 (1875).	
30. *A. xanthodactyla*, Treitschke, Schmett. Eur. Vol. 10 (2), p. 251 (1834).	S. Europe, Asia Minor.
galactodactylus, Duponchel. Hist. Nat. Lép. Fr. Vol. 11, p. 314 (1838).	
xerodactyla, Zeller, Isis, p. 860 (1841).	
31. *A. subalternans*, Lederer, Hor. Soc. Ent. Ross. Vol. 6, p. 93, pl. 5, f. 15 (1866).	W. C. Asia.
32. *A. marptys*, Christ, ibidem, Vol. 9, p. 39, pl. 2*a*, f. 35 (1869).	S. E. Europe.
33. *A. probolias*, Meyrick, Ent. M. Mag. p. 12 (1891).	N. Africa.
34. *A. tuneta*, Staudinger, Iris, Vol. 5, p. 300 (1892).	N. Africa.

35. *A. chordodactyla*, Staudinger, Stett. Ent. Zeit. p. 259 (1859). S. Europe.
36. *A. Wernickei*, Wocke, Iris, Vol. 10, p. 376 (1897). C. Europe.
37. *A. icterodactyla*, Mann, Verh. Zool.-bot. Ges. Wien, p. 43 (1855). S. Europe.
38. *A. malacodactyla*, Zeller, Isis, p. 905 (1847). S. Europe, Asia Minor.
39. *A. innotatalis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 945 (1864). New Zealand.
40. *A. tetradactyla*, Linnæus, Syst. Nat. Ed. 10, p. 542 (1758). Europe, Asia Minor, Canada.
leucodactyla, Hübner, Samml. Eur. Schmett. f. 5 (1825).
41. *A. particiliata*, Walsingham, Proc. Zool. Soc. Lond. p. 916, pl. 51, f. 3 (1907). Canary Islands.
42. *A. calcaria*, Lederer, Hor. Soc. Ent. Ross. Vol. 8, p. 26, pl. 2, f. 15 (1868). W. C. Asia.
43. *A. hesperidella*, Walsingham, Proc. Zool. Soc. Lond. p. 917 (1907). Canary Islands.
44. *A. acarnella*, Walsingham, Ent. M. Mag. p. 131 (1898). S. Europe.
45. *A. punctinervis*, Constant, Ann. Soc. Ent. Fr. p. 14, pl. 1, f. 35 (1885). S. Europe.
46. *A. decipiens*, Lederer, Hor. Soc. Ent. Ross. Vol. 8, p. 27, pl. 2, f. 17 (1868). W. C. Asia.
47. *A. adumbrata*, Walsingham, Trans. Ent. Soc. Lond. p. 282, pl. 13, f. 47 (1881). S. Africa.
48. *A. tripunctata*, Walsingham, ibidem, p. 283, pl. 13, f. 48 (1881). S. Africa.
49. *A. sesamitis*, Meyrick, Journ. Bombay Nat. Hist. Soc. p. 582 (1905). Burma.
50. *A. galactodactyla*, Hübner, Samml. Eur. Schmett. f. 2 (1825). C. Europe, Asia Minor.
51. *A. cinerascens*, Walsingham, Pterop. Calif. p. 57, pl. 3, f. 13 (1880). N. America.

13. Genus PSELNOPHORUS, Wallengren

Pselnophorus. Wallengren, Ent. Tidsk. Vol. 11, p. 96 (1881). — Type : *P. brachydactylus*, Treitschke.
Gypsochares. Meyrick, Trans. Ent. Soc. Lond. p. 488 (1890). — Type : *P. baptodactylus*, Zeller.
Crasimetis. Meyrick, ibidem, p. 489 (1890). — Type : *P. brachydactylus*, Tr.

Characters. — Forehead without tuft; ocelli obsolete. Labial palpi moderate, more or less ascending, second joint loosely scaled, terminal pointed. Tibiæ sometimes thickened on origin of spurs. Forewings bifid, cleft from about middle; 2 connate with or out of 4, 3 out of 4, 5 and 6 very short, 8 out of 7 or absent, 9 absent, 10 out of 7, 11 out of 7 or separate. Hindwings trifid, third segment without black scales in dorsal cilia; 2 from middle of cell, 3 absent, 5 and 6 very short, 7 to apex.

Geographical distribution of species. — Structurally intermediate between *Alucita* and *Pterophorus*. With the exception of one South American species (which I have not seen), the few known species are confined to Europe and Asia.

1. *P. catharotes*, Meyrick, Trans. Ent. Soc. Lond. p. 491 (1907). — **Plate, Fig. 8.** India.
2. *P. albitarsellus*, Walsingham, in Swinhoe, Cat. Lep. Het. Vol. 11, p. 542 (1900). India.
3. *P. baptodactylus*, Zeller, Stett. Ent. Zeit. p. 211 (1850). S. Europe.
4. *P. olbiadactylus*, Millière, Icon. Lép. inéd. Vol. 1, p. 89, pl. 9, f. 1-3 (1864). S. Europe.
Hedemanni, Rebel, Ann. Nat. Hofm. Vol. 11, p. 115, pl. 3, f. 3 (1896).
5. *P. hemiargus*, Meyrick, Trans. Ent. Soc. Lond. p. 491 (1907). S. W. Asia.
6. *P. alternarius*, Zeller, Zool.-bot. Ges. Wien, p. 447, pl. 12, f. 14 (1874). S. America.
7. *P. brachydactylus*, Treitschke, Schmett. Eur. Vol. 9 (2), p. 238 (1833). N. and C. Europe, Asia Minor.
aëtodactylus, Duponchel, Papillons de France, Vol. 11, p. 313 (1838).
Poggei, Mann, Wien. Ent. Mon. p. 409, pl. 3, f. 16 (1862).
8. *P. vilis*, Butler, Trans. Ent. Soc. Lond. p. 594 (1881). E. Siberia, Japan.
amurensis, Christ, Bull. Soc. Nat. Mosc. Vol. 1, p. 43 (1882).

14. Genus ADAINA, Tutt

Adaina. Tutt, Ent. Record, Vol. 17, p. 37 (1905) (undescribed). — Type : *A. microdactyla*, Hübner.

Characters. — Forehead without tuft; ocelli obsolete. Labial palpi moderate, ascending, slender, terminal joint pointed. Tibiæ simple. Forewings bifid, cleft from before two-thirds; 2 from near angle, 3 and 4 connate or stalked, 5 and 6 short, 9 absent, 10 out of 8, 11 separate. Hindwings trifid, third segment without black scales in dorsal cilia; 2 from middle of cell, 3 absent, 5 and 6 very short, 7 and 8 divergent.

Geographical distribution of species. — A development of *Pterophorus*. Apparently an American genus, with one European representive.

1. *A. hodias*, Meyrick, Trans. Ent. Soc. Lond. p. 492 (1907). S. America.
2. *A. invida*, Meyrick, ibidem, p. 493 (1907). S. America.
3. *A. praeusta*, Möschler, Abh. Senckenb. Naturf. Ges. Frankf. Vol. 15, p. 346 (1890). W. Indies.
4. *A. participata*, Möschler, ibidem, p. 346 (1890). W. Indies.
5. *A. bipunctata*, Möschler, ibidem, p. 346 (1890). N. America, W. Indies.
6. *A. thomae*, Zeller, Hor. Soc. Ent. Ross. p. 480, pl. 6, f. 170 (1877). W. Indies.
7. *A. microdactyla*, Hübner, Samml. Eur. Schmett. f. 26, 27 (1825). N. and C. Europe, Asia Minor.

15. Genus PTEROPHORUS, Geoffroy

Pterophorus. Geoffroy, Hist. Nat. Ins. (1762). — Type : *P. monodactylus*, Linnæus.
Oidæmatophorus. Wallengren, Skand. Fjädermott. (1859). — Type : *P. lithodactylus*, Treitschke.
Leioptilus. Wallengren, ibidem (1859). — Type : *P. scarodactylus*, Hübner.
Ovendenia. Tutt, Ent. Record, Vol. 17, p. 37 (1905) (undescribed). — Type : *P. lienigianus*, Zeller.
Hellinsia. Tutt, ibidem, p. 37 (1905) (undescribed). — Type : *P. osteodactylus*, Zeller.
Emmelina. Tutt, ibidem, p. 37 (1905) (undescribed). — Type : *P. monodactylus*, Linnæus.

Characters. — Forehead without tuft; ocelli obsolete. Labial palpi moderate or short, more or less ascending, slender, sometimes loosely scaled, terminal joint pointed. Tibiæ sometimes thickened with scales on origin of spurs. Forewings bifid, cleft from towards middle; 2 from three-fourths, 3 and 4 connate or stalked, 5 and 6 very short, 9 absent, 10 and 11 separate. Hindwings trifid, third segment without black scales in dorsal cilia; 2 from middle of cell, 3 absent, 5 and 6 very short, 7 to apex.

Geographical distribution of species. — A development of *Stenoptilia*. This extensive genus is especially numerous in North and South America, but it is also well represented in Europe, Asia and Africa; no species is found in Australia or New Zealand. This distribution might indicate a North American origin, but it is more probable that the genus originated with the rest in Asia.

1. *P. pavidus*, Meyrick, Trans. Ent. Soc. Lond. p. 493 (1907). S. Africa.
2. *P. timidus*, Meyrick, ibidem, p. 494 (1907). S. Africa.
3. *P. orchatias*, Meyrick, ibidem, p. 511 (1907). S. Africa.
4. *P. subnotatus*, Walker, Melliss St. Helena, p. 193 (1875). St. Helena.
5. *P. triadias*, Meyrick, Trans. Ent. Soc. Lond. p. 494 (1907). India.
6. *P. harpactes*, Meyrick, ibidem, p. 495 (1907). India.
7. *P. sematias*, Meyrick, ibidem, p. 496 (1907). Ceylon.
8. *P. procontias*, Meyrick, ibidem, p. 496 (1907). — **Plate, Fig. 14.** India.
9. *P. lienigianus*, Zeller, Linn. Ent. Vol. 6, p. 380 (1851). C. Europe, India, Ceylon.

meliuodactylus, Herrich-Schäffer, Syst. Bearb. Schmett. Europ. f 33 (1855).
scarodactyla, Becker, Ann. Soc. Ent. Belg. p. 56, pl. 2, f. 3 (1861).
serindibanus, Moore, Lep. Ceyl. Vol. 3, p. 527, pl. 209, f. 14 (1887).

10. *P. palmatus*, Meyrick, Trans. Ent. Soc. Lond. p. 495 (1907). S. America.
11. *P. sericeodactylus*, Pagenstecher, Zoologica, Vol. 29, p. 240 (1900). Bismarck Islands.
12. *P. rhynchosiae*, Dyar, Psyche, Vol. 8, p. 249 (1898). N. America.
13. *P. carphodactylus*, Hübner, Samml. Eur. Schmett. f. 19, 20 (1825). C. and S. Europe, N. Africa.
huphthalmi, Hofmann, Illustr. Zeitschr. f. Ent. Vol. 3, p. 340 (1898).
14. *P. inulae*, Zeller, Linn. Ent. Vol. 6, p. 384 (1851). E. Europe.
15. *P. melanoschismus*, Walsingham, Proc. Zool. Soc. Lond. p. 920, pl. 51, f. 1 (1907). Canary Islands.
16. *P. pectodactylus*, Staudinger, Stett. Ent. Zeit. p. 258 (1859). S. Europe.
coniodactylus, Staudinger, ibidem, p. 258 (1859).
chrysocomae, Ragonot, Bull. Soc. Ent. Fr. p. 74 (1875).
17. *P. bogotanus*, Felder, Reise Novara, Lep. Het. pl. 140, f. 48 (1877). S. America.
18. *P. osteodactylus*, Zeller, Isis, p. 451, pl. 4, f. 8, 9 (1841). Europe.
microdactylus, Zetterstedt, Ins. Lappon. p. 1013 (1840).
cinerariae, Millière, Icon. Lép. inéd. Vol. 3, p. 418, pl. 152, f. 1 (1874).
19. *P. stramineus*, Walsingham, Pteroph. Calif. p. 41, pl. 3, f. 3 (1880). N. America.
20. *P. distinctus*, Herrich-Schäffer, Syst. Bearb. Schmett. Europ. Vol. 5, p. 379 (1855). C. Europe.
21. *P. helianthi*, Walsingham, Pteroph. Calif. p. 54, pl. 3, f. 2 (1880). N. America.
22. *P. mathewianus*, Zeller, Verh. Zool.-bot. Ges. Wien, p. 445, pl. 12, f. 13 (1874). N. America.
23. *P. scarodactylus*, Hübner, Samml. Eur. Schmett. f. 21, 22 (1825). N. and C. Europe.
? *icarodactyla*, Treitschke, Schmett. Eur. Vol. 9 (2), p. 247 (1833).
24. *P. lenis*, Zeller, Hor. Soc. Ent. Ross. p. 479, pl. 6, f. 169 (1877). S. America.
25. *P. innocens*, Snellen, Tijdschr. v. Ent. Vol. 27, p. 195, pl. 10, f. 9 (1884). E. Siberia.
26. *P. cineraceus*, Fish, The Canad. Entom. Vol. 13, p. 73 (1881). N. America.
27. *P. Baroni*, Fish, ibidem, p. 73 (1881). N. America.
28. *P. gratiosus*, Fish, ibidem, p. 73 (1881). N. America.
29. *P. lugubris*, Fish, ibidem, p. 140 (1881). N. America.
30. *P. Barberi*, Dyar, Proc. Ent. Soc. Wash. Vol. 5, p. 228 (1903). N. America.
31. *P. oxyntes*, Meyrick, Trans. Ent. Soc. Lond. p. 498 (1907). S. America.
32. *P. stadias*, Meyrick, ibidem, p. 498 (1907). S. America.
33. *P. spermatias*, Meyrick, ibidem, p. 499 (1907). S. America.
34. *P. cinerarius*, Philippi, Linn. Ent. Vol. 14, p. 296 (1864). S. America.
35. *P. montis-christi*, Walsingham, Proc. Zool. Soc. Lond. p. 59 (1897). W. Indies.
36. *P. fumiventris*, Zeller, Hor. Soc. Ent. Ross. p. 472, pl. 6, f. 165 (1879). S. America.
37. *P. tephradactylus*, Hübner, Samml. Eur. Schmett. f. 17 (1825). N. and C. Europe.
38. *P. pelospilus*, Zeller, Hor. Soc. Ent. Ross. p. 481 (1877). S. America.
39. *P. ossipellis*, Walsingham, Proc. Zool. Soc. Lond. p. 60 (1907). W. Indies.
40. *P. glaphyrotes*, Meyrick, Trans. Ent. Soc. Lond. p. 497 (1907). S. America.
41. *P. Caudelli*, Dyar, Proc. Ent. Soc. Wash. Vol. 5, p. 228 (1903). N. America.
42. *P. ochricostatus*, Zeller, Hor. Soc. Ent. Ross. p. 484, pl. 6, f. 171 (1877). S. America.
43. *P. hololeucus*, Zeller, Verh. Zool.-bot. Ges. Wien, p. 445 (1874). S. America.
44. *P. agraphodactylus*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 941 (1864). N. America, W. Indies.
aspilodactylus, Walker, ibidem, p. 941 (1864).
45. *P. homodaclylus*, Walker, ibidem, p. 941 (1864). N. America.
46. *P. Elliottii*, Fernald, The Canad. Entom. Vol. 25, p. 95 (1893). N. America.
47. *P. paleaceus*, Zeller, Verh. Zool.-bot. Ges. Wien, p. 326 (1873). N. America, W. Indies.
sericidactylus, Murtfeldt. Amer. Ent. Vol. 3, p. 235 (1880).
48. *P. angustus*, Walsingham, Pter. Cal. p. 43, pl. 3, f. 4 (1880). N. America.
49. *P. inconditus*, Walsingham, ibidem, p. 44, pl. 3, f. 5 (1880). N. America.
50. *P. subochraceus*, Walsingham, ibidem, p. 53, pl. 3, f. 10 (1880). N. America.
51. *P. lacteodactylus*, Chambers, The Canad. Entom. Vol. 5, p. 72 (1873). N. America.
52. *P. sulphureidactylus*, Packard, Ann. Lyc. New York, p. 266 (1873). N. America.

53. *P. chlorias*, Meyrick, Trans. Ent. Soc. Lond. p. 497 (1907). N. America.
54. *P. grandis*, Fish, The Canad. Entom. Vol. 13, p. 141 (1881). N. America.
55. *P. aquila*, Meyrick, Trans. Ent. Soc. Lond. p. 503 (1907). N. America.
56. *P. basalis*, Möschler, Abh. Senckenb. Naturf. Ges. Frankf. Vol. 15, p. 345 (1890). W. Indies.
57. *P. Rileyi*, Fernald, Pteroph. N. Amer. p. 50 (1898). N. America.
58. *P. Kellicotti*, Fish, The Canad. Entom. Vol. 13, p. 141 (1881). N. America.
59. *P. cretidactylus*, Fitch, Trans. New York Agr. Soc. Vol. 14, p. 849 (1854). N. America.
occidentalis, Walsingham, Pteroph. Calif. p. 37, pl. 2, f. 13, 14 (1880).
60. *P. eupatorii*, Fernald, The Canad. Entom. Vol. 25, p. 96 (1893). N. America.
cretidactylus, Zeller, Verh. Zool.-bot. Ges. Wien, p. 444 (1874).
61. *P. guttatus*, Walsingham, Pteroph. Calif. p. 36, pl. 2, f. 12 (1880). N. America.
62. *P. nivalis*, Meyrick, Trans. Ent. Soc. Lond. p. 499 (1907). W. Indies.
63. *P. Fishii*, Fernald, The Canad. Entom. Vol. 25, p. 95 (1893). N. America.
64. *P. conjunctus*, Zeller, Hor. Soc. Ent. Ross. p. 477, pl. 6, f. 168 (1877). S. America.
65. *P. inquinatus*, Zeller, Verh. Zool.-bot. Ges. Wien, p. 325 (1873). N. America, W. Indies.
ambrosiae, Murtfeldt, Amer. Ent. Vol. 3, p. 236 (1880).
66. *P. acrias*, Meyrick, Trans. Ent. Soc. Lond. p. 500 (1907). N. America.
67. *P. chionastes*, Meyrick, ibidem, p. 501 (1907). N. America.
68. *P. Brucei*, Fernald, Pteroph. N. Amer. p. 42 (1898). N. America
69. *P. nigrosparsus*, Zeller, Hor. Soc. Ent. Ross. p. 482 (1877). S. America.
70. *P. grisescens*, Walsingham, Pteroph. Calif. p. 34, pl. 2, f. 11 (1880). N. America.
71. *P. lithodactylus*, Treitschke, Schmett. Eur. Vol. 9 (2), p. 245 (1833). N. and C. Europe, Asia Minor.
septodactyla, Treitschke, ibidem, p. 246 (1833).
lithoxylodactylus, Duponchel, Papillons de France, Vol. 11, p. 313 (1838).
similidactyla, Dale, Ann. Mag. Nat. Hist. Vol. 7, p. 263 (1834).
72. *P. glochinias*, Meyrick, Trans. Ent. Soc. Lond. p. 501 (1907). S. America.
73. *P. Rogenhoferi*, Mann, Verh. Zool.-bot. Ges. Wien, p. 79 (1871). C. Europe.
74. *P. Constanti*, Ragonot, Bull. Soc. Ent. Fr. p. 200 (1875). S. C. Europe.
75. *P. nodipes*, Zeller, Hor. Soc. Ent. Ross. p. 473, pl. 6, f. 166 (1877). S. America.
76. *P. fusciciliatus*, Zeller, ibidem, p. 475, pl. 6, f. 167 (1877). S. America.
77. *P. citrites*, Meyrick, Trans. Ent. Soc. Lond. p. 502 (1907). N. America.
78. *P. gigantëus*, Mann, Verh. Zool.-bot. Ges. Wien, p. 570 (1855). S. Europe.
79. *P. parvus*, Walsingham, Pteroph. Calif. p. 55, pl. 3, f. 12 (1880). N. America.
80. *P. balanotes*, Meyrick, Trans. Ent. Soc. Lond p. 503 (1907). N. America.
81. *P. monodactylus*, Linnæus, Syst. Nat. (ed. 10), p. 542 (1758). Europe, W. C. Asia, N. Africa, N. America.
pterodactyla, Hübner, Samml. Eur. Schmett. f. 4 (1825).
cinereidactylus, Fitch, Trans. New York Agr. Soc. Vol. 14, p. 848 (1854).
naevosidactylus, Fitch, ibidem, p. 849 (1854).
pergracilidactylus, Packard, Ann. Lyc. Nat. Hist. New York, p. 266 (1873).

16. Genus MARASMARCHA, Meyrick

Marasmarcha. Meyrick, Trans. Ent. Soc. Lond. p. 91 (1886). — Type : *M. lunidactyla*, Haworth.

Exelastis. Meyrick, Journ. Bombay Nat. Hist. Soc. Vol. 17, p. 730 (1907). — Type : *M. atomosa*, Walsingham.

Characters. — Forehead sometimes with tuft of scales; ocelli obsolete. Labial palpi moderate, ascending, slender, terminal joint pointed. Tibiæ simple. Forewings bifid, cleft from between one-half to two-thirds; 2 from near angle, 3 and 4 connate or stalked, 5 and 6 short, 9 absent, 10 out of 8, 11 separate. Hindwings trifid, without scaletooth in dorsal cilia (in *M. atomosa* with some scattered scales towards base); 2 from middle of cell, 3 and 4 connate or stalked, 5 and 6 very short or obsolete, 7 to apex.

Geographical distribution of species. — A development of *Stenoptilia*, or perhaps of an unknown form collaterally allied to *Stenoptilia*. Principally European and Asiatic; the larvæ are especially attached to *Leguminosae*, and the wide range of certain species is probably due to artificial introduction with their cultivated foodplants.

1. *M. atomosa*, Walsingham, Proc. Zool. Soc. Lond. p. 885 (1885).	India, Ceylon, Arabia, New Guinea.
ebalensis, Rebel, Lep. Sokotra, p. 84 (1907).	
2. *M. liophanes*, Meyrick, Trans. Ent. Soc. Lond. p. 19 (1886). — **Plate, Fig. 15.**	India, Ceylon, Réunion, Borneo, Bismarck Islands.
griseodactylus, Pagenstecher, Zoologica, Vol. 29, p. 240 (1900).	
3. *P. bonaespei*, Walsingham, Trans. Ent. Soc. Lond. p. 281, pl. 13, f. 46 (1881). — **Plate, Fig. 13.**	S. Africa.
4. *P. ehrenbergiana*, Zeller, Isis, p. 833 (1841).	S. W. Asia.
5. *P. agrorum*, Herrich-Schäffer, Syst. Bearb. Schmett. Europ. Vol. 5, p. 378 (1855).	S. Europe.
oxydactylus, Staudinger, Stett. Ent. Zeit. p. 258 (1859).	
tuttodactyla, Chapman, Ent. Record, p. 178 (1906).	
6. *M. rhypodactyla*, Staudinger, Berl. Ent. Zeitschr. p. 327 (1870).	S. E. Europe.
7. *M. trimmatodactyla*, Christ, Hor. Soc. Ent. Ross. Vol. 9, p. 38, pl. 2*a*, f. 34 (1873).	S. E. Europe.
8. *M. lunidactyla*, Haworth, Lep. Brit. p. 477 (1811) (*lunaedactyla*).	C. and S. Europe, W. C. Asia.
phaeodactyla, Hübner, Samml. Eur. Schmett. f. 14, 15 (1825).	
9. *M. fauna*, Millière, Cat. Lép. des Alpes Marit. p. 308 (1875).	S. Europe.

17. Genus STENOPTILIA, Hübner

Stenoptilia. Hübner, Verz. bek. Schmett. p. 430 (1826). — Type : *S. pterodactyla*, Linnæus.
Mimæseoptilus. Wallengren, Skand. Fjädermott. p. 18 (1859). — Type : *S. pelidnodactyla*, Stein.
Adkinia. Tutt, Ent. Record, Vol. 17, p. 37 (1905) (undescribed). — Type : *S. bipunctidactyla*, Haworth.

Characters. — Face with rounded or conical horny prominence or strong tuft of scales; ocelli sometimes distinct. Labial palpi porrected or subascending, second joint with loose rough or tolerably appressed scales, terminal joint filiform. Tibiæ simple. Forewings bifid, cleft from about two-thirds; 2 from beyond middle, 3 from near angle, 5 and 6 short, 8 and 9 stalked, 10 and 11 separate. Hindwings trifid, third segment without black scales in dorsal cilia; 2 from before middle of cell, 3 from near angle, 5 and 6 very short, 7 and 8 divergent.

Geographical distribution of species. — This genus together with *Platyptilia* can be satisfactorily assumed as the ancestral form of all the preceding genera; but though obviously related to *Agdistis*, they cannot be justly derived from it, and should be regarded as collateral derivatives from a common ancestor unknown. It is practically cosmopolitan, yet of only moderate extent.

1. *S. celidota*, Meyrick, Trans. N. Zeal. Inst. p. 125 (1884).	Australia, New Zealand.
?tinctidactylus, Newman, Trans. Ent. Soc. Lond. Vol. 3 (n. s.), p. 300 (1856).	
2. *S. phaeonephes*, Meyrick, Trans. Ent. Soc. Lond. p. 19 (1886).	Tasmania.
3. *S. leuconephes*, Meyrick, ibidem, p. 20 (1886).	S. E. Australia.
4. *S. lithoxesta*, Meyrick, Trans. N. Zeal. Inst. p. 127 (1884). — **Plate, Fig. 18.**	New Zealand.
5. *S. charadrias*, Meyrick, ibidem, p. 126 (1884).	New Zealand.
6. *S. longalis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 943 (1864).	S. Africa.
7. *S. impersonalis*, Walker, ibidem, p. 942 (1864).	S. America.
8. *S. Schwarzi*, Dyar, Proc. Ent. Soc. Wash. Vol. 5, p. 228 (1903).	N. America.
9. *S. pumilio*, Zeller, Verh. Zool.-bot. Ges. Wien, p. 24 (1873).	N. America.
gilvidorsis, Hedemann (part.), Stett. Ent. Zeit. Vol. 57, p. 8 (1896)	
10. *S. pulchra*, Christ, Mém. Lép. Romanoff, Vol. 2, p. 164, pl. 8, f. 13 (1885).	W. C. Asia.

11. *S. miantodactyla*, Zeller, Isis. p. 835 (1841).	S. E. Europe.
12. *S. Nolckeni*, Tengstroem, Cat. Lep. Faun. Fenn. p. 366 (1869).	N. Europe.
13. *S. coprodactyla*, Zeller, Linn. Ent. Vol. 7, p. 366 (1852).	C. Europe, Asia Minor.
? arvernicus, Peyerimhoff, Pet. Nouv. Ent. Vol. 7, p. 514 (1875).	
? lutescens, Herrich-Schäffer. Syst. Bearb. Schmett. Europ. Vol. 5, p. 377 (1855).	
14. *S. stigmatodactyla*, Zeller, Linn. Ent. Vol. 7, p. 374 (1852).	C. and S. Europe, W. C.
15. *S. Mengeli*, Fernald, Pterop. N. Amer. p. 60 (1898).	Greenland. [Asia.
16. *S. Sahlbergi*, Poppius, Act. Soc. Fauna Flor. Fenn. Vol. 28 (3), 9 (1906).	N. Europe.
17. *S. graphodactyla*, Treitschke, Vol. 9 (2), p. 233 (1833).	C. Europe.
pneumonanthes, Schleich, Stett. Ent. Zeit. p. 472 (1880).	
plagiodactylus, Snellen (part.), Vlind. Nederl. Vol. 2, p. 1037 (1882).	
18. *S. albistriolata*, Zeller, Hor. Soc. Ent. Ross. p. 469, pl. 6, f. 163 (1877).	S. America.
19. *S. orites*, Meyrick, Trans. N. Zeal. Inst. p. 126 (1884).	New Zealand.
20. *S. antarctica*, Staudinger, Hamburger Magalhaensiche Sammelreise, Vol. 4, p. 114 (1899).	S. America.
21. *S. pelidnodactyla*, Stein, Isis, p. 105 (1837).	Europe.
mictodactylus, Zeller, Isis, p. 836, pl. 4, f. 28-31 (1841).	
? Millieridactylus, Bruand, Ann. Soc. Ent. Fr. p. 36, pl. 2, f. 9 (1861).	
borealis, Wocke, Stett. Ent. Zeit. p. 217 (1864).	
22. *S. pinarodactyla*, Erschoff, Hor. Soc. Ent. Ross. Vol. 12, p. 348 (1876).	E. Siberia.
23. *S. zophodactyla*, Duponchel, Papillons de France, Vol. 11, p. 314 (1838).	C. and S. Europe, Asia Minor, India, Ceylon, E. Australia, S. America.
Loewii, Zeller, Isis, p. 38 (1847).	
canalis, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 944 (1864).	
24. *S. petraea*, Meyrick, Trans. Ent. Soc. Lond. p. 504 (1907).	India.
25. *S. zalocrossa*, Meyrick, Ent. M. Mag. p. 146 (1907).	C. Europe.
26. *S. bipunctidactyla*, Haworth, Lep. Brit. p. 476 (1811).	Europe, W. C. Asia, N. Africa.
aridus, Zeller, Isis, p. 904 (1847).	
plagiodactylus, Stainton, Cat. Brit. Tin. and Pterop. Suppl. p. 28 (1851).	
serotinus, Zeller, Linn. Ent. Vol. 6, p. 36 (1851).	
islandicus, Staudinger, Stett. Ent. Zeit. p. 280 (1857).	
Hodgkinsonii, Gregson, Ent. M. Mag. Vol. 4, p. 178 (1868).	
scabiodactylus, Gregson, ibidem, p. 363 (1868).	
27. *S. emarginata*, Snellen, Tijdschr. v. Ent. Vol. 27, p. 193, pl. 10, f. 8 (1884).	E. Siberia.
28. *S. exclamationis*, Walsingham, Pteroph. Calif. p. 32, pl. 2, f. 10 (1880).	N. America.
29. *S. semicostata*, Zeller, Verh. Zool.-bot. Ges. Wien, p. 323 (1873).	N. America.
30. *S. pterodactyla*, Linnæus, Fauna Suecica, p. 1456 (1761).	Europe, W. C. Asia, N. America.
fuscus, Retzius, Cor. de Geer Gen. et Spec. Ins. p. 35 (1783).	
ptilodactyla, Hübner, Samml. Eur. Schmett. f. 16 (1825).	
fuscodactylus, Haworth, Lep. Brit. p. 476 (1811).	
paludicola, Wallengren, Skand. Fjädermott. p. 18 (1859).	
31. *S. Mannii*, Zeller, Linn. Ent. Vol. 6, p. 375 (1851).	S. E. Europe, W. C. Asia.
32. *S. tenuis*, Felder, Reise Novara, Lep. Het. pl. 140, f. 50 (1877).	S. America.
gilvidorsis, Zeller, Hor. Soc. Ent. Ross. p. 471, pl. 6, f. 164 (1877).	
33. *S. coloradensis*, Fernald, Pteroph. N. Amer. p. 61 (1898).	N. America.

18. Genus UTUCA, Walker

Utuca, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 951 (1864). — Type : *U. ochracealis*, Walker.
Uroloba. Walsingham, Ent. M. Mag. Vol. 27, p. 261 (1891). — Type : *U. fuscicostata*, Walsingham.

Characters. — Forehead with projecting scales, crown with bifid scales. Labial palpi ascending, second joint more or less loosely scaled, terminal joint porrected, obtuse. Tibiæ simple. Forewings very shortly bifid, cleft from four-fifths or less; 2 from about three-fourths, 3 and 4 connate, 5 apparently obsolete, 6 and 7 moderately long, 8 and 9 stalked, 10 and 11 separate. Hindwings trifid, without black

scales in dorsal cilia; 2 from beyond middle of cell, 3 and 4 approximated, 5 and 6 short, 7 and 8 diverging.

Geographical distribution of species. — Probably related collaterally to *Stenoptilia*. Confined to South America.

1. *U. fuscicostata*, Walsingham, Ent. M. Mag. Vol. 27, p. 262 (1891) S. America.
2. *U. ochracealis*, Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 951 (1864). S. America.

GROUP B. — Hindwings entire

19. Genus OCHYROTICA, Walsingham

Ochyrotica, Walsingham, Ent. M. Mag. Vol 27, p. 217 (1891). — Type : *O. fasciata*, Walsingham.
Steganodactyla, Walsingham, ibidem, p. 241 (1891). — Type : *O. concursa*, Walsingham.

Characters. — Forehead without tuft, crown with erect bifid scales; ocelli present. Labial palpi slender, second joint subascending, with appressed scales, terminal joint long, tolerably pointed. Tibiæ more or less thickened on origin of spurs. Forewings entire, termen concave-sinuate; 2 from three-fourths or beyond, 3 and 4 approximated, 5-7 parallel, 8 and 9 stalked, 10 and 11 separate. Hindwings entire, termen sinuate or biconcave; 2 from middle of cell, 3 from angle, 4 absent, 5 parallel, transverse vein outwardly oblique, 6 and 7 somewhat approximated.

Geographical distribution of species. — Closely related to *Agdistis*, yet with some curious premonitory characters of the higher genera of the family. The distribution would seem to be tropical.

1. *O. concursa*, Walsingham, Ent. M. Mag. Vol. 27, p. 241 (1891). Ceylon.
2. *O. connexiva*, Walsingham, ibidem, p. 242 (1891). Burma, India.
3. *O. fasciata*, Walsingham, ibidem, p. 218 (1891). C. and S. America, W. Indies.

20. Genus ATOMOPTERYX, Walsingham

Atomopteryx, Walsingham, Ent. M. Mag. Vol. 27, p. 216 (1891). — Type : *A. Doeri*, Walsingham.

Characters. — Forehead without tuft. Antennæ nearly as long as forewings. Labial palpi porrected, second joint with projecting scales, terminal joint minute. Tibiæ simple. Forewings entire, termen rounded; 2 from beyond middle, 3 and 4 connate, 5 to 7 parallel, 8 and 9 stalked, 10 and 11 separate. Hindwings entire, termen sinuate; 2 from middle of cell, 3 and 5 stalked, 4 absent, 6 and 7 parallel.

Geographical distribution of species. — Apparently a development of *Agdistis*; confined to South America.

1. *A. Doeri*, Walsingham, Ent. M. Mag. Vol. 27, p. 216 (1871). S. America.

21. Genus AGDISTIS, Hübner

Agdistis, Hübner, Verz. bek. Schmett. p. 429 (1826). — Type : *A. adactyla*, Hübner.
Adactylus, Curtis, Brit. Ent. Vol. 10 (1833) (= **Adaclyla**, Zeller). — Type : *A. Bennetii*, Curtis.

Ernestia, Tutt, Brit. Lep. Vol. 5, p. 128 (undescribed). — Type : *A. lerinensis*, Millière.
Herbertia, Tutt, ibidem, p. 129 (undescribed). — Type : *A. tamaricis*, Zeller.

Characters. — Forehead usually with horny prominence; ocelli present. Labial palpi ascending, second joint with projecting scales beneath, terminal very short. Tibiæ simple. Forewings entire, termen rounded or sinuate: 2 from towards angle, 3 and 4 approximated or stalked, 5 to 7 parallel, 8 and 9 approximated at base, 9 and 10 approximated or connate, 11 separate. Hindwings entire, termen bowed, dorsum with scattered rough scales beneath, black scales on median vein beneath covered by a pecten of dense scales from above; 2 from middle of cell, 4 absent, 5 parallel, transverse vein outwardly oblique, 6 and 7 nearly parallel.

Geographical distribution of species. — A singular genus, combining primitive and specialised characters. It appears to be characteristic of the European region, whence stragglers have spread to Ceylon, South Africa, and St. Helena, and most of the species are littoral in habit. The form of the frontal prominence (often neglected) is important for discrimination.

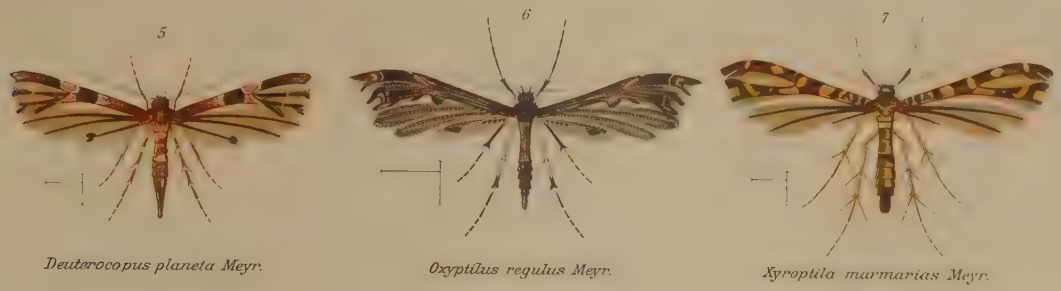
1. *A. nanodes*, Meyrick, Journ. Bombay Nat. Hist. Soc. p. 136 (1906). — **Plate, Fig. 16.**	Ceylon.
2. *A. minima*, Walsingham, Bull. Liverp. Mus. Vol. 3, p. 1 (1900).	Sokotra.
3. *A. satanas*, Millière, Bull. Soc. Ent. Fr. p. 168 (1875). *? delphinensella*, Bruand, Ann. Soc. Ent. Fr. p. 893 (1858).	S. Europe.
4. *A. canariensis*, Rebel, Ann. Naturh. Hofmus. Wien, Vol. 11, p. 114 (1896).	Canary Islands.
5. *A. adactyla*, Hübner, Samml. Eur. Schmett. f. p. 32, 34 (1825). *Huebneri*. Zeller, Isis, p. 771 (1841).	C. and S. Europe, W. and C. Asia.
6. *A. Bennetii*, Curtis, Brit. Ent. Vol. 10, p. 471 (1833).	C. Europe.
7. *A. staticis*, Millière, Bull. Soc. Ent. Fr. p. 167 (1875).	S. Europe, N. Africa.
8. *A. sanctae-helenae*, Wollaston, Ann. Mag. Nat. Hist. (5), Vol. 3, p. 440 (1879).	St. Helena.
9. *A. pustulalis*. Walker, List Lep. Het. Brit. Mus. Vol. 30, p. 927 (1864).	S. Africa.
10. *A. sphinx*. Walsingham, Ent. Record, p. 54 (1907).	N. Africa.
11. *A. paralia*, Zeller, Isis, p. 899 (1847). *manicata*, Staudinger, Stett. Ent. Zeit. p. 257 (1859).	S. Europe.
12. *A. ingens*, Christ, Mém. Lép. Romanoff, Vol. 2, p. 124, pl. 5, f. 16 (1885).	W. C. Asia.
13. *A. Heydenii*. Zeller, Linn. Ent. Vol. 6, p. 322 (1851).	S. Europe.
14. *A. lerinensis*, Millière, Bull. Soc. Ent. Fr. p. 168 (1875).	S. Europe, N. Africa.
15. *A. meridionalis*, Zeller, Isis, p. 898 (1847).	S. Europe.
16. *A. frankeniae*, Zeller, ibidem, p. 900 (1847).	S. Europe, N. Africa.
17. *A. salsolae*, Walsingham, Proc. Zool. Soc. Lond. p. 922 (1907).	Canary Islands.
18. *A. tamaricis*, Zeller, Isis, p. 899 (1847).	C. and S. Europe, W. C. Asia, N. Africa.

EXPLANATION OF PLATE

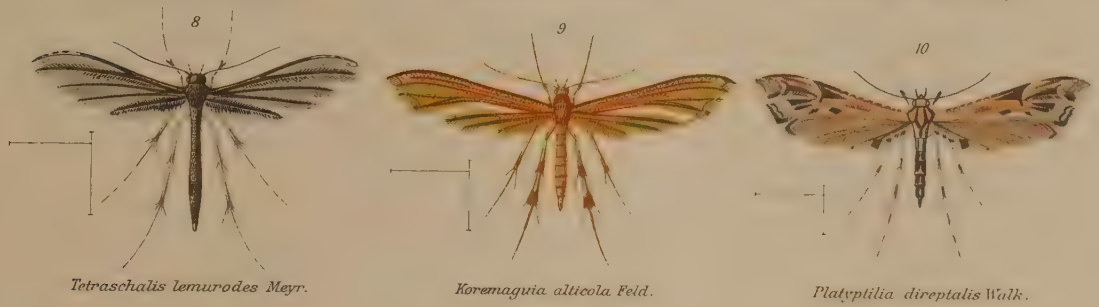
Fig. 1. *Diacrotricha aglaodesma*, Meyrick.
— 2. *Trichoptilus xerodes*, Meyrick.
— 3. *Sphenarches caffer*, Zeller.
— 4. *Heptaloba argyriodactyla*, Walker.
— 5. *Deuterocopus planeta*, Meyrick.
— 6. *Oxyptilus regulus*, Meyrick.
— 7. *Xyroptila marmarias*, Meyrick.
— 8. *Tetraschalis lemurodes*, Meyrick.
— 9. *Koremaguia alticola*, Felder.
— 10. *Platyptilia direptalis*, Walker.
— 11. *Alucita elaeopa*, Meyrick.
— 12. *Pselnophorus catharotes*, Meyrick.
— 13. *Marasmarcha bonaespei*, Walsingham.
— 14. *Pterophorus procontias*, Meyrick.
— 15. *Marasmarcha liophanes*, Meyrick.
— 16. *Agdistis nanodes*, Meyrick.
— 17. *Steganodactyla connexiva*, Walsingham.
— 18. *Stenoptilia lithoxesta*, Meyrick.

Marlborough, 15th June 1908.

1 *Diacrotricha aglaodesma Meyr.*
2 *Trichoptilus xerodes Meyr.*
3 *Sphenarches caffer Zeller*
4 *Heptaloba argyriodactyla Walk.*

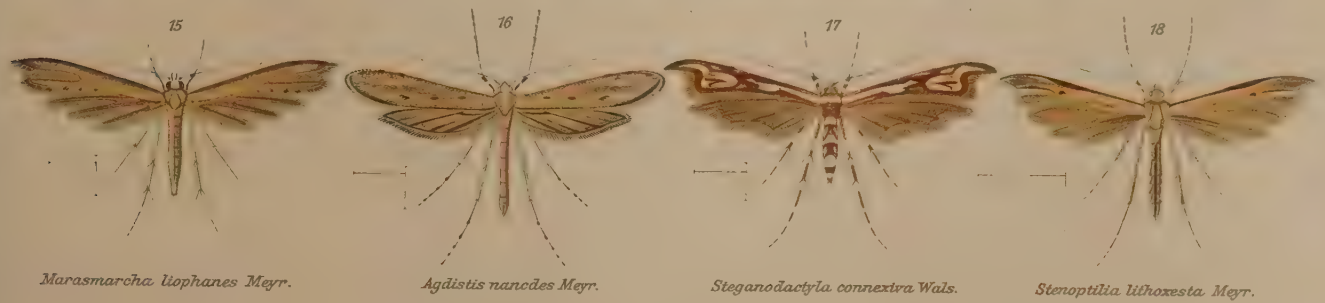


5 *Deuterocopus planeta Meyr.*
6 *Oxyptilus regulus Meyr.*
7 *Xyroptila marmarias Meyr.*



8 *Tetraschalis lemurodes Meyr.*
9 *Koremagnia alticola Feld.*
10 *Platyptilia direptalis Walk.*

11 *Alucita elaeopa Meyr.*
12 *Pselnophorus catharotes Meyr.*
13 *Marasmarcha bonaespei Wals.*
14 *Pterophorus procontias Meyr.*



15 *Marasmarcha liophanes Meyr.*
16 *Agdistis nanodes Meyr.*
17 *Steganodactyla connexiva Wals.*
18 *Stenoptilia lithoxesta Meyr.*

ORTHOPTERA

FAM. BLATTIDÆ

SUBFAM. EPILAMPRINÆ

ORTHOPTERA

FAM. BLATTIDÆ

SUBFAM. EPILAMPRINÆ

by R. SHELFORD

WITH 2 COLOURED PLATES

THE Epilamprinæ form the fourth division in the classification of the Blattidæ.

Characters. — Antennæ setaceous, never plumose, very occasionally incrassated slightly. Pronotum variable in form. Tegmina coriaceous or corneous, fully developed or reduced. Wings fully developed, reduced or absent, mediastinal vein typically multiramose, costal veins irregular, ramose, ulnar vein with several incomplete rami. Supra-anal lamina : (♂) more or less quadrate with obtuse angles, (♀) sub-bilobate, produced. Femora armed beneath sparsely or strongly. Tarsi with distinct pulvilli, and in all but one genus with arolia. Ovo-viviparous or viviparous.

This sub-family presents almost as many difficulties to the systematist as the Phyllodromiinæ; Saussure attempted a revision of it in 1895 (*Rev. Suisse Zool.*), but in reality only indicated the lines along which revision should proceed. The most important characters for taxonomic purposes are found in the tarsal structure and as nearly all authors have omitted detailed notice of these characters in their specific diagnoses, no really satisfactory revision can be made until the vast majority of type-specimens are re-examined. The scheme of classification here adopted can only be tentative and extended knowledge of the group will doubtless lead to a shuffling of many species. Further subdivision of the genus *Homalopteryx* based on the form of the tegmina and tarsal structure and of the genera *Calolampra* and *Aüdreia* based on the tarsal structure is possible and, as I believe, desirable, but is postponed until more material for such subdivision comes to hand. *Epilampra* as a genus is as unwieldy as *Phyllodromia* and is even more difficult to deal with; the species of the latter genus do present readily recognisable characters useful for splitting the genus into well-marked sections and the difficulty of the systematist lies mainly in the fact that many authors fail to describe these characters. But in the case of

Epilampra not only are the diagnoses of the species for the most part very vague, but the species themselves are remarkably uniform and often can only be separated with difficulty. Brunner von Wattenwyl with his usual perspicacity has indicated one character which seems to be of great value in dividing *Epilampra* into two sections : 1° with the pronotum punctate, 2° with the pronotum smooth; if these two types of pronotal structure can be shewn to be correlated with definite tarsal differences, the commencement of a reliable subdivision of *Epilampra* will have been made. Kirby has separated off the Old World species of *Epilampra* to form a genus *Heterolampra*, but this genus is described so vaguely that the New World species fit into it as readily as the Old World species. In spite of a careful scrutiny of a considerable number of species I can find no characters whereon to base a division in accordance with geographical limits and for the present I leave *Epilampra* very much as it has been since 1895.

KEY TO THE GENERA

1. *Tarsi very short, posterior metatarsus much shorter than the succeeding joints.*
2. *Form convex.*
3. *Pronotum anteriorly produced covering the vertex of the head. Wings with normal venation* . . . . . 1. Genus Phoraspis, Serville.
3'. *Vertex of head exposed. Wings when present with abnormal venation.*
4. *Wings with triangular apical area* . . . . . 2. Genus Notolampra, Saussure.
4'. *Wings without triangular apical area.*
5. *Wings fully developed in both sexes. Anal vein of tegmina absent in both sexes* . . . . . 3. Genus Thorax, Saussure.
5'. *Wings reduced, rudimentary or absent in ♀. Anal vein of tegmina present in ♂* . . . . . 4. Genus Phlebonotus, Saussure.
2'. *Form depressed.*
3. *Tegmina and wings fully developed in both sexes.*
4. *Pronotum posteriorly sub-truncate. Tarsi fimbriate beneath* . . 5. Genus Pinaconota, Saussure.
4'. *Pronotum posteriorly produced. Tarsi not fimbriate beneath.* . 6. Genus Apsidopis, Saussure.
3'. *Tegmina truncate, quadrate. Wings absent* . . . . . 7. Genus Compsolampra, Saussure.
1'. *Tarsi longer, posterior metatarsus longer than, equal to, or very little shorter than the succeeding joints.*
2. *Posterior metatarsus entirely unarmed beneath.*
3. *Pronotum obtusely produced posteriorly* . . . . . 8. Genus Morphna, nov. gen.
3'. *Pronotum truncate posteriorly* . . . . . 10. Genus Homalopteryx, Brunner von [Wattenwyl (pars).
2'. *Posterior metatarsus spined beneath.*
3. *Posterior metatarsus armed with spines beneath only at the base, its pulvillus produced towards the base of the joint.*
4. *Sexes similar.*
5. *Tegmina and wings fully developed in both sexes* . . . . 10. Genus Homalopteryx, Brunner von [Wattenwyl (pars).
5'. *Tegmina and wings reduced to squamiform rudiments* . . . 11. Genus Opisthoplatia, Brunner von [Wattenwyl.
4'. *Sexes dissimilar* . . . . . 9. Genus Molytria, Stål.
3'. *Posterior metatarsus armed with spines beneath throughout the greater part of its length, its pulvillus apical.*

4. *Pronotum posteriorly truncate* . . . . . 12. Genus PHOETALIA, Stâl.
4'. *Pronotum posteriorly more or less produced* (1).
5. *Tarsal arolia absent* . . . . . 13. Genus ATAXIGAMIA, Tepper.
5'. *Tarsal arolia present.*
6. *Sexes dissimilar.*
7. *Vertex of head covered by the pronotum* . . . . . 14. Genus RHICNODA, Brunner von Wat-
7'. *Vertex of head exposed.* [tenwyl.
8. *Tegmina :* (♂) *completely developed,* (♀) *lobiform* . . 15. Genus CALOLAMPRA, Saussure.
8'. *Tegmina :* (♂) *reduced,* (♀) *truncate or absent* . . . 16. Genus AÜDREIA, nov. gen.
6'. *Sexes similar.*
7. *Vertex of head covered by the pronotum.*
8. *Pronotum with sub-reflexed margin* . . . . . 17. Genus TRIBONOIDEA, Shelford.
8'. *Pronotum not as above.*
9. *Pulvilli large, second to fourth tarsal joints not spined* . 18. Genus PSEUDOPHORASPIS, Kirby.
9'. *Pulvilli small, second to fourth tarsal joints spined* . . 19. Genus HEDAIA, Saussure & Zehn-
7'. *Vertex of head exposed.* [tner.
8. *Wings truncate or acuminate at apex.*
9. *Wings truncate at apex* . . . . . 20. Genus RHABDOBLATTA, Kirby.
9'. *Wings acuminate at apex* . . . . . 21. Genus DEROCARDIA, Saussure.
8'. *Wings rounded at apex.*
9. *Femora strongly armed* . . . . . 22. Genus EPILAMPRA, Burmeister.
9'. *Femora sparsely armed* . . . . . 23. Genus EUSTEGASTA, Gerstäcker.

1. GENUS PHORASPIS, SERVILLE

Phoraspis, Serville, Ann. Sc. Nat. Vol. 22, p. 43 (1831); Hist. Ins. Orth. p. 124 (1839).
Cyrtilia, Stâl, Bih. Svenska Akad. Vol. 2 (13), p. 11 (1874).

Characters. — Form convex. Antennæ setaceous. Pronotum rhomboidal, posteriorly arcuate, anteriorly covering vertex of head. Tegmina convex, semi-corneous, lanceolate, densely punctate, venation obscured, anal vein absent in both sexes, mediastinal vein on ventral surface incrassated. Wings coloured, ulnar vein sending incomplete rami to dividing vein and several complete rami to apex. Supra-anal lamina : (♂) transverse, (♀) quadrate, apex emarginate. Sub-genital lamina : (♂) broad, transverse with two short styles, (♀) produced, ample, margins sinuate, sub-carinate and with two lateral folds. Cerci short, acuminate. Legs slender, femora sparsely armed; tarsi short, pulvilli large, posterior metatarsus not spined beneath, shorter than succeeding joints.

Geographical distribution of species. — West Indies, Central and South America.

1. *P. pellucens*, Thunberg, Mém. Acad. Sc. St-Pétersb. Vol. 10, p. 276, pl. 14 (1826). Brazil, Surinam.
P. luctuosa, Saussure, Rev. Zool. (2), Vol. 20, p. 356 (1868).
2. *P. convexa*, Thunberg, Mém. Acad. Sc. St-Pétersb. Vol. 10, p. 279 (1826). Brazil.
— Pl. I, Figs. 1, 1a.
P. heydeniana, Saussure, Rev. Zool. (2), Vol. 16, p. 309 (1864).
? *P. conspersa*, Burmeister, Handb. Ent. Vol. 2, p. 493 (1838).

(1) Except in the subapterous and apterous forms.

3. *P. cassidea*, Dalman, Anal. Ent. p. 87 (1823). Brazil.
4. *P. flavipes*, Blanchard, Ann. Soc. Ent. Fr. Vol. 6, p. 291, pl. 11, f. 2 (1837). Brazil.
5. *P. atomaria*, Blanchard, ibidem, p. 287, pl. 10, f. 2 (1837). Guadeloupe, Brazil.
   P. unicolor, Burmeister, Handb. Ent. Vol. 2, p. 493 (1838).
6. *P. luteola*, Blanchard, Ann. Soc. Ent. Fr. Vol. 6, p. 290, pl. 11, f. 1 (1837). Brazil.
7. *P. pantherina*, Blanchard, ibidem, p. 292, pl. 11, f. 3 (1837). Haiti, Brazil.
8. *P. fastuosa*, Blanchard, ibidem, p. 293, pl. 11, f. 4 (1837). Brazil.
   ? *P. albicollis*, Burmeister, Handb. Ent. Vol. 2, p. 493 (1838).
9. *P. conspersa*, Brullé, Hist. Nat. Ins. Vol. 9, p. 60, pl. 3, f. 4 (1835). Brazil.
10. *P. leucogramma*, Perty, Del. Anim. Art. p. 116, pl. 30, f. 3 (1830). Brazil.
11. *P. picta*, Drury, Ill. Exot. Ent. Vol. 3, pl. 50, f. 3 (1782). Brazil.
    Lampyris rufovittata, Schoenherr, Syn. Ins. Vol. 1 (3), p. 66 (1817).
12. *P. nigra*, Blanchard, Ann. Soc. Ent. Fr. Vol. 6, p. 297, pl. 11, f. 7 (1837). Brazil.
13. *P. modesta*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 161 (1865). Brazil.
14. *P. mexicana*, Saussure, Rev. Zool. (2), Vol. 14, p. 228 (1862). Mexico.
15. *P. bicolor*, Saussure & Zehntner, Biol. Centr. Amer. Orth. Vol. 2, p. 161 (1893). C. America (?), Brazil.

2. Genus NOTOLAMPRA, Saussure

Notolampra. Saussure, Rev. Zool. (2), Vol. 14, p. 227 (1862); Mém. Hist. Nat. Mexique, Blatt. p. 139 (1864).

Characters. — Form convex. Pronotum rhomboidal, anteriorly not covering vertex of head. Tegmina corneous, finely punctate, scarcely or not exceeding the apex of the abdomen, venation obscured, anal vein absent in the female. Wings fully developed in both sexes, a prominent apical triangle. Legs as in preceding genus. Supra-anal lamina (♀) triangularly produced, apex emarginate. Cerci short.

Geographical distribution of species. — Brazil, West Indies.

1. *N. gibba*, Thunberg, Mém. Acad. Sc. St-Pétersb. Vol. 10, p. 279 (1826). Brazil.
   — **Pl. 1, Fig 2.**
   Phoraspis cassidea, Burmeister, Handb. Ent. Vol. 2, p. 493 (1838).
   Epilampra lucida, Saussure, Rev. Zool. (2), Vol. 14, p. 227 (1862).
2. *N. punctata*, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 23, p. 125 (1873). Brazil.
3. *N. antillarum*, Shelford, Ann. Mag. Nat. Hist. (7), Vol. 19, p. 38 (1907). Martinique.

3. Genus THORAX, Saussure

Thorax. Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 17, p. 141 (1863).
Paraphoraspis. Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 163 (1865).

Characters. — Form convex. Pronotum trapezoidal, posteriorly arcuate, anteriorly not covering vertex of head. Tegmina strongly convex, semicorneous, minutely punctate, anal vein not visible. Wings fully developed in both sexes, with very large posterior field, axillary vein giving off near its apex numerous rami; anterior field narrow, dividing vein strongly curved, ulnar vein giving off to it several incomplete rami. Legs as in preceding genus. Supra-anal lamina subtriangularly produced, apex emarginate. Cerci short.

Geographical distribution of species. — India, Ceylon, Australia.

1. *T. porcellana*, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 17, p. 142, pl. 1, f. 9 (1863). Nilghiris, Ceylon, Victoria.
   Paraphoraspis notata, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 164, pl. 4, f. 18 (1865).
2. *T. ? castanea*, Tepper, Trans. Roy. Soc. S. Austral. Vol. 18, p. 173 (1894). Victoria.

4. Genus PHLEBONOTUS, Saussure

Phlebonotus. Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 17, p. 141 (1863).
Planes. Saussure, Mém. Hist. Nat. Mexique, Blatt. p. 141 (1864).

Characters. — Male moderately convex, rather elongate, female very convex. Pronotum punctate, trapezoidal, anteriorly not covering vertex of head, posteriorly sub-truncate. Tegmina : (♂) exceeding the apex of the abdomen, coriaceous, venation well-marked, anal vein impressed, seriately punctate, (♀) not or barely exceeding apex of abdomen, corneous, venation obscure, anal vein absent, seriately punctate Wings : (♂) as long as tegmina, anterior part rather narrow, vena dividens strongly curved, ulnar vein with numerous incomplete rami, posterior part ample, first axillary vein giving off near its apex numerous rami in a flabellate manner, (♀) reduced, rudimentary or absent, in the former case the posterior part is minute, the anterior part coriaceous. Femora very sparsely armed beneath. Tarsi short, metatarsi scarcely as long as the two succeeding joints, not spined beneath; all the pulvilli very large.

Geographical distribution of species. — India, Ceylon, Java.

1. *P. pallens*, Serville, Ann. Sc. Nat. Vol. 22, p. 43 (1831); Hist. Nat. Ins. Orth. p. 125, pl. 3, f. 4 (1839). — **Pl. I, Figs. 3, 4.** Bengal, Assam, Ceylon, Java.
   Epilampra cribrata, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 17, p. 144, pl. 1, f. 10 (1863).
   Epilampra intacta, Walker, Cat. Blatt. Brit Mus. p. 205 (1868).
2. *P. anomala*, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 17, p. 141, pl. 1, f. 8 (1863). Madras, Pondichery, Nilghiris.

5. Genus PINACONOTA, Saussure

Pinaconota, Saussure, Rev. Suisse Zool. Vol. 3, pp. 333, 337 (1895).

Characters. — Form depressed. Pronotum trapezoidal, anteriorly and posteriorly sub-truncate, deeply punctate. Scutellum exposed. Tegmina and wings fully developed, extending beyond the apex of the abdomen. Femora moderately spined beneath. Tarsi very short, fimbriate and entirely unarmed beneath; posterior metatarsus equal in length to the two succeeding joints, its pulvillus large. Arolia very large.

Geographical distribution of species. — Brazil.

1. *P. bifasciata*, Saussure, Rev. Zool. (2), Vol. 14, p. 165 (1862); Miss. Sc. Mexique. Orth. p. 84, pl. 2, f. 44 (1870). Brazil.
   Ischnoptera sicca, Walker, Cat. Blatt. Brit. Mus. Suppl. p. 149 (1869).
2. *P. obliqua*, Walker, ibidem, p. 148 (1869). Brazil.
   P. obliqua, Shelford, Trans. Ent. Soc. Lond. p. 496, pl. 30, f. 5 (1906).

6. Genus APSIDOPIS, Saussure

Apsidopis, Saussure, Rev. Suisse Zool. Vol. 3, p. 338 (1895).

Characters. — Eyes very convex, not widely separated on vertex of head. Pronotum cucullatè, anteriorly produced completely covering the head, posteriorly strongly produced. Tegmina and wings completely developed in both sexes, the latter sometimes with acuminate apex. Femora moderately armed. Tarsi short, completely unarmed beneath, sometimes fimbriate; posterior metatarsus equal in length to the two succeeding joints, all the pulvilli very large.

Geographical distribution of species. — Borneo.

1. *A. cyclops*, Saussure, Rev. Suisse Zool. Vol. 3, p. 338, pl. 9, f. 7 (1895). Borneo.
2. *A. wallacei*, Shelford, Ann. Mag. Nat. Hist. (7), Vol. 19, p. 38 (1907). Borneo.
3. *A. oxyptera*, Walker, Cat. Blatt. Brit. Mus. p. 199 (1868). — **Pl. I, Fig. 5.** Borneo.

7. Genus COMPSOLAMPRA, Saussure

Compsolampra. Saussure, Soc. Ent. Zurich, Vol. 8, p. 58 (1893).

Characters. — Pronotum covering vertex of head, posteriorly truncate. Tegmina quadrate, not extending beyond the first abominal tergite. Wings absent. Femora sparsely armed, front femora unarmed on front margin beneath. Tarsi very short; posterior metatarsi shorter than the three succeeding joints, entirely unarmed beneath, their pulvilli large, produced towards the base.

Geographical distribution of species. — Java, China.

1. *C. liturata*, Serville, Hist. Nat. Ins. Orth. p. 103 (1839). — **Pl. I, Fig. 6.** Java, China.
   Periplaneta insolitā, Walker, Cat. Blatt. Brit. Mus. p. 146 (1868).
   Epilampra quadrata, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 23, p. 129 (1873).

8. Genus MORPHNA, nov. gen.

Molytria. Saussure, Rev. Suisse Zool. Vol. 3, p. 333 (1895).

Characters. — Form rather depressed. Vertex of head covered or almost covered by pronotum, which is trapezoidal, sub-cucullate and posteriorly produced obtusely. Tegmina and wings fully developed exceeding the apex of the abdomen. Supra-anal lamina of typical Epilamprine shape. Cerci moderately long. Femora moderately armed beneath. Posterior metatarsus equal in length to succeeding joints; all the joints entirely unarmed beneath, their pulvilli large, pulvillus of metatarsus apical but produced towards the base of the joint.

Geographical distribution of species. — India to Malay Archipelago.

1. *M. amplipennis*, Walker. Cat. Blatt. Brit. Mus. p. 196 (1868). Silhet.
2. *M. plana*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 183 (1865). India, Ceylon.
   Epilampra punctifera, Walker, Cat. Blatt. Brit. Mus. p. 198 (1868).
   Homalopteryx biplagiata, Bolivar, Ann. Soc. Ent. Fr. Vol. 66, p. 296 (1897).
3. *M. maculata*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 179 (1865). — **Pl. I, Figs. 7, 7a.** Singapore, Borneo.
   Epilampra polyspila, Walker, Cat. Blatt. Brit. Mus. p. 197 (1868).
   Molytria shelfordi, Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 275 (1903).

4. *M. badia*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 189 (1865). Singapore, Sumatra, Borneo, Java.
Epilampra dotata, Walker, Cat. Blatt. Brit. Mus. Suppl. p. 130 (1869).
Epilampra ramifera, Walker, ibidem, p. 132 (1869).

9. Genus MOLYTRIA, Stål

Molytria. Stål, Bih. Svensk. Akad. Vol. 2 (13), p. 12 (1875).

Characters. — Form depressed. Pronotum trapezoidal, anteriorly not covering vertex of head, posteriorly very obtusely produced. Tegmina : (♂) exceeding the apex of the abdomen or falling little short of it, (♀) sub-quadrate not extending beyond the second abdominal tergite. Wings : (♂) as long as tegmina, (♀) minute, sub-squamiform. Posterior metatarsi as long as the succeeding joints, armed at its base with a few spines in a double row, its pulvillus produced towards the base of the joint; remaining joints with large pulvilli entirely unarmed beneath.

Geographical distribution of species. — Australia.

1. *M. inquinata*, Stål, Freg. Eugen. Resa, Ins. p. 309 (1858). — **Pl. I, Fig. 8.** Australia.
Epilampra nudiventris, Saussure, Rev. Zool. (2), Vol. 16, p. 321 (1864).
Epilampra notabilis, Walker, Cat. Blatt. Brit. Mus. p. 202 (1868).
2. **M. perplexa, nov. sp.** (1). Victoria.

10. Genus HOMALOPTERYX, Brunner von Wattenwyl

Homalopteryx. Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 195 (1865).

Characters. — Form depressed. Pronotum anteriorly parabolic, completely covering or just failing to cover the vertex of the head, posteriorly truncate or sub-truncate. Tegmina and wings fully developed or reduced. Femora sparsely armed. Posterior metatarsi shorter than, or equal to, the remaining joints, armed beneath with a few spines at the base uniseriately or biseriately arranged, occasionally unarmed beneath.

Geographical distribution of species. — India to Malay Archipelago, Papuasia, Australia (?), S. America.

1. *H. patinifera*, Bolivar, Ann. Soc. Ent. Fr. Vol. 66, p. 295 (1897). Trichinopoly.
2. *H. decolyi*, Bolivar, ibidem, p. 294 (1897). Trichinopoly.
3. *H. carviniceps*, Bolivar, ibidem, p. 296 (1897). Trichinopoly.
4. *H. auriculata*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 181 (1865). Bengal.
5. **H maindroni, nov. sp.** (2). — **Pl. I, Fig. 9.** Malabar coast.

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(1) **M. perplexa, nov. sp.** — *Male.* — Head castaneous, vertex piceous, antennæ fuscous. Pronotum piceous, laterally margined with hyaline mottled with castaneous. Tegmina extending to ante-penultimate abdomial tergite, castaneous, costal margins testaceous, mediastinal vein piceous. Wings a little shorter than tegmina. Abdominal tergites slightly plicated, a pair of spiracular tubes projecting from beneath the seventh abdominal tergite. Supra-anal lamina trapezoidal, barely exceeded by the sub-genital lamina (cerci and tarsi mutilated). Length 27 mm.; length of tegmina 19 mm.; pronotum 7 mm. × 9.8 mm. Victoria, Gippsland (Melbourne Museum).

(2) **H. maindroni, nov. sp.** — *Female.* — Rufo-testaceous. Vertex of head with fuscous markings. Pronotum anteriorly barely covering vertex of head, posteriorly sub-truncate, deeply punctate, disc with two oblique impressions. Tegmina broad, not extending beyond the penultimate abdominal tergite, seriate-punctate. Wings minute, squamiform. Abdomen with tergites posteriorly plicated, beneath testaceous, sprinkled with castaneous; supra-anal lamina produced, sub-quadrate, apex very slightly emarginate. Cerci short. Front femora with three spines on anterior margin beneath, remaining femora very sparsely armed; formula of apical spines 0/1, 1/1, 0/0. Posterior metatarsi equal in length to the three succeeding joints, entirely unarmed beneath, its pulvillus apical. Total-length 20 mm.; length of tegmina 17 mm.; pronotum 8.5 mm. × 13 mm. Mahé, Malabar (Maindron coll.) (Paris Museum)

6. *H. templetonii*, Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 275 (1903). — Ceylon.
7. *H. adusta*, Walker, Cat. Blatt. Brit. Mus. Suppl. p. 132 (1869). — Borneo.
   H. adusta, Shelford, Trans. Ent. Soc. Lond. p. 497, pl. 30, f. 6 (1906).
8. *H. major*, Saussure, Rev. Suisse Zool. Vol. 3, p. 342 (1895). — Java.
9. *H. macassariensis*, Haan, in Temminck, Verhandel. Orth. p. 51, pl. 18, f. 7 (1842). — **Pl. 1, Fig. 10.** — Philippines, Celebes, Amboina, Ceram.
   Epilampra basifera, Walker, Cat. Blatt. Brit. Mus. Suppl. p. 132 (1869).
   Epilampra strigifrons, Walker, ibidem, p 132 (1869).
10. *H. pelewensis*, Saussure, Rev. Suisse Zool. Vol. 3, p. 342 (1895). — Pelew Islands.
11. *H. intermedia*, Bolivar, Act. Soc. Esp. Hist. Nat. p. 137 (1898). — « Papua ».
12. *H. capucina*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 196, pl. 5, f. 21 (1865). — Venezuela, Columbia.

Doubtful species :

13. *H. geochroma*, Walker, Cat. Blatt. Brit. Mus. p. 158 (1868). — Habitat (?).

11. Genus OPISTHOPLATIA, Brunner von Wattenwyl

Opisthoplatia, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 198 (1865).

Characters. — Depressed, oblong. Pronotum anteriorly parabolic, covering vertex of head, posteriorly truncate. Tegmina and wings in both sexes reduced to squamiform lobes. Cerci very short. Sub-genital lamina (♂) with two styles. Posterior metatarsus unarmed beneath and with a large pulvillus prolonged towards the base of the joint, as long as the three succeeding joints.

Geographical distribution of species. — China, India, Brazil (?).

1. *O. orientalis*, Burmeister, Handb. Ent. Vol. 2, p. 482 (1838). — China, India, Brazil (?).
   Nympha aptera (part), Stoll, Spectres, Blatt. p. 8, pl. 5*d*, f. 25 (1813).
   Polyzosteria pictetiana, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 17, p. 131, pl. 1, f. 1 (1863).

12. Genus PHÆTALIA, Stål

Phætalia, Stål, Bih. Svensk. Akad. Vol. 2 (13), p. 17 (1875).

Characters. — Form depressed. Pronotum trapezoidal, anteriorly not covering the vertex of the head, posteriorly truncate. Scutellum exposed. Tegmina and wings similar in both sexes, not or barely exceeding the apex of the abdomen. Femora sparsely armed, front femora with a few spines on anterior margin beneath. Tarsi moderately long, posterior metatarsi equal in length to succeeding joints, biseriately spined beneath, remaining joints not armed.

Geographical distribution of species. — Atlantic Islands, Mascarene Islands, South America, West Indies.

1. *P. laevigata*, Beauvois, Ins. Afr. Amér. Orth. p. 228, pl. 2*c*, f. 4 (1805). — Teneriffe, Haiti, Cuba, Brazil.
   Nauphoeta pallida, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 286 (1865).
   Nauphoeta marginalis, Walker, Cat. Blatt. Brit. Mus. p. 41 (1868).
2. *P. circumvagans*, Burmeister, Handb. Ent. Vol. 2, p. 508 (1838). — Madeira, Teneriffe, Mascarene Islands, Cuba, St. Domingo, Brazil.
   P. marginicollis, Stål, Freg. Eugen. Resa Ins. p. 307 (1858).
   P. laevigata, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 285, pl. 7, f. 33 (1865).

13. Genus ATAXIGAMIA, Tepper

Ataxigamia. Tepper, Trans. Roy. Soc. S. Austral. Vol. 17, p. 123 (1893).

Characters. — Eyes wide apart. Pronotum anteriorly truncate, freely exposing vertex of head, posteriorly produced obtusely, disc rugose with impressions, margins slightly reflected. Scutellum exposed. Tegmina and wings fully developed, exceeding the apex of the abdomen considerably; anal field of tegmina narrow, lanceolate. Supra-anal lamina (♂) sub-quadrate, apex not emarginate, subgenital lamina trapezoidal, symmetrical, notched in the middle of the posterior margin; styles small. Cerci short. Legs with more or less abundant pubescence. Femora sparsely armed. Tarsi moderately long; posterior metatarsus equal to the succeeding joints in length, biseriately spined beneath, its pulvillus small, apical; the remaining joints spined. Arolia absent.

Geographical distribution of species. — Australia.

1. *A. tatei*, Tepper, Trans. Roy. Soc. S. Austral. Vol. 17, p. 123 (1893). S. Australia.
2. **A. bicolor, nov. sp.** (1). — **Pl. 1, Fig. 11.** S. Australia.

14. Genus RHICNODA, Brunner von Wattenwyl

Rhicnoda. Brunner von Wattenwyl, Ann. Mus. Stor. Nat. Genova, Vol. 33, p. 30 (1893).

Characters. — Form depressed. Pronotum anteriorly parabolic, covering vertex of head, in ♂ posteriorly produced, in ♀ truncate. Tegmina and wings fully developed in ♂, tegmina reduced to squamiform lobes or absent and wings absent in ♀. Abdomen (♀) with a pair of spiracular tubes projecting on either side from beneath the seventh tergite. Femora moderately spined. Tarsi long, posterior metatarsi biseriately spined beneath, longer than the succeeding joints, pulvilli apical, remaining joints with spines surrounding their pulvilli.

Geographical distribution of species. — Tropical Asia, Japan, Australia, West Indies, Central America.

1. *R. rugosa*, Brunner von Wattenwyl, Ann. Mus. Stor. Nat. Genova, Vol. 33, p. 31, pl. 1, f. 2 (1893). Burma, Borneo, Java, Halmahera.
2. *R. terranea*, Walker, Cat. Blatt. Brit. Mus. p. 163 (1868). Ceylon.
3. *R. plicata*, Navás, Bol. Soc. Aragon, Vol. 3, p. 130 (1904). Himalayas.
4. *R. desidiosa*, Rehn, Proc. U. S. Nat. Mus. Vol. 27, p. 552 (1904). Siam.
5. *R. spinulosa*, Brunner von Wattenwyl, Ann. Mus. Stor. Nat. Genova, Vol. 33, p. 31 (1893). Java.
6. *R. natatrix*, Shelford, The Zoologist, p. 226 (1907). — **Pl. 2, Figs. 1.** Borneo.
7. *R. obscurifrons*, Stål, Oefv. Vet.-Akad. Förh. Vol. 34 (10), p. 34 (1877). Philippines.
8. *R. maculata*, Shiraki, Ann. Zool. Japon. Vol. 6, p. 32, pl. 2, f. 4 (1906). Japan.
9. *R. laminata*, Brunner von Wattenwyl, Proc. Zool. Soc. Lond. p. 294, pl. 15, f. 4 (1892). West Indies.
10. *R. reflexa*, Saussure & Zehntner, Biol. Centr. Amer. Orth. Vol. 1, p. 68, pl. 4, f. 35 (1893). Nicaragua.

(1) **A. bicolor, nov. sp.** — *Male.* — Bright rufo-testaceous, tegmina and wings castaneous. Head with shallow punctures. Pronotum hexagonal with rounded angles, disc sub-rugose with two oblique impressions and some shallow punctures. Tegmina with mediastinal field and veins at base rufous. Posterior margins of abdominal sternites with one row of small tubercles. Legs with very sparse erect pubescence. Front femora with five spines on anterior margin, three on posterior margin, beneath, remaining femora rather strongly armed. Pulvilli of tarsal joints strongly spined, the apical tarsal joint biseriately spined beneath. Total length 46 mm.; length of body 34 mm.; length of tegmina 38 mm.; pronotum 10 mm × 14.2 mm. South Australia, Tennant's Creek (Oxford Museum).

15. Genus CALOLAMPRA, Saussure

Calolampra. Saussure, Soc. Ent. Zurich, Vol. 8, p. 57 (1893); Rev. Suisse Zool. Vol. 3, p. 344 (1895).

Characters. — Vertex of head in ♂ freely exposed, in ♀ sometimes covered. Pronotum : (♂) posteriorly produced obtusely, (♀) truncate. Tegmina : (♂) long, considerably exceeding the apex of the abdomen, (♀) lobiform. Wings : (♂) as long as the tegmina, (♀) absent. Abdomen in ♀ very broad. Femora rather sparsely armed beneath. Tarsi long, posterior metatarsi longer than the succeeding joints spined beneath, second joint not spined with large pulvillus, or with spines round the pulvillus, or with spines beneath and apical pulvillus.

Geographical distribution of species. — Indian Empire, Siam, Australia, S. and E. Africa, Central America (?).

1. *C. characterosa*, Walker, Cat. Blatt. Brit. Mus. p. 209 (1868).	Bengal.
2. *C. marginata*, Brunner von Wattenwyl, Ann. Mus. Stor. Nat. Genova, Vol. 33, p. 28, pl. 1, f. 9 (1893).	Burma.
3. *C. laevis*, Brunner von Wattenwyl, ibidem, p. 28 (1893).	Tenasserim.
4. *C. pedisequa*, Rehn, Proc. U. S. Nat. Mus. Vol. 27, p. 547 (1904).	Siam.
5. *C. irrorata*, Fabricius, Syst. Ent. p. 272 (1775).	Australia.
Epilampra gracilis, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 170, pl. 4, f. 20 (1865).	
Epilampra atomifera, Walker, Cat. Blatt. Brit. Mus. p. 69 (1868).	
Polyzosteria propria, Walker, ibidem, p. 161 (1868).	
6. *C. fornicata*, Saussure, Rev. Zool. (2), Vol. 16, p. 320 (1864).	Australia.
7. *C. depolita*, Brancsik, Jahresb. Ver. Trencsin. Comit. Vol. 19-20, p. 57 (1897).	Australia.
8. *C. aspera*, Tepper, Trans. Roy. Soc. S. Austral. Vol. 17, p. 62 (1893).	S. and W. Australia.
9. *C. fraserensis*, Tepper, ibidem, p. 59 (1893).	S. and W. Australia.
10. *C. obscura*, Tepper, ibidem, p. 64 (1893).	Australia.
11. *C. paula*, Tepper, ibidem, p. 60 (1893).	S. Australia.
12. *C. tepperi*, Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 275 (1903).	Australia.
Epilampra propria, Tepper, Trans. Roy. Soc. S. Austral. Vol. 17, p. 64 (1893).	
13. *C. marginalis*, Walker, Cat. Blatt. Brit. Mus. p. 119 (1868).	W. Australia.
14. *C. pardalina*, Walker, ibidem, p. 68 (1868).	S. Africa.
15. *C. aptera*, Schulthess, Ann. Mus. Stor. Nat. Genova, Vol. 39, p. 169, pl. 2, f. 2 (1898).	Kilimandjaro, German East Africa.
16. *C. bispinosa*, Saussure, Soc. Ent. Zurich, Vol. 8, p. 58 (1893).	New Granada, Panama.
C. bispinosa, Saussure & Zehntner, Biol. Centr. Amer. Orth. Vol. 1, p. 67, pl. 3, f. 26 (1893).	
17. *C. brevitarsis*, Saussure, Soc. Ent. Zurich, Vol. 8, p. 38 (1893).	New Granada, Panama.
C. brevitarsis, Saussure & Zehntner, Biol. Centr. Amer. Orth. Vol. 1, p. 67, pl. 4, f. 39 (1893).	
18. *C. atra*, Tepper, Trans. Roy. Soc. S. Austral. Vol. 17, p. 65 (1893).	S. Australia.
19. *C. tatei*(1), Tepper, ibidem, Vol. 18, p. 174 (1894).	S. Australia, Northern territory.
20. *C. antica*, Walker (larva), Cat. Blatt. Brit. Mus. p. 161 (1868).	Habitat (?).
21. *C. dimorpha*, Shiraki, Ann. Zool. Japon. Vol. 6, Pt. 1, p. 22, pl. 2, f. 6 (1906).	Japan.
Polyzosteria congrua, Walker, Cat. Blatt. Brit. Mus. p. 165 (1868), from Congo, included by Kirby in the genus *Calolampra*, is a species of *Temnopteryx*.	

1) This species is possibly not an Epilamprine.

1

Phoraspis convexa.

5

Apsidopis oxyptera.

6

Compsolampra lituratа.

7a

Phoraspis picta.

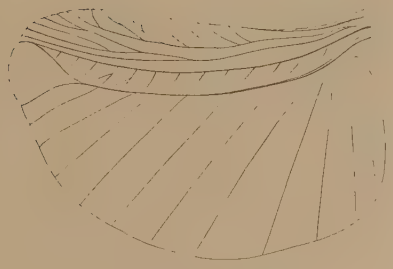
3

Phlebonotus pallens. ♂

7

Morphna maculata.

2



Notolampra gibba.

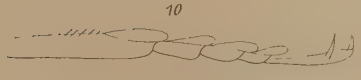
4

Phlebonotus pallens. ♀

7a

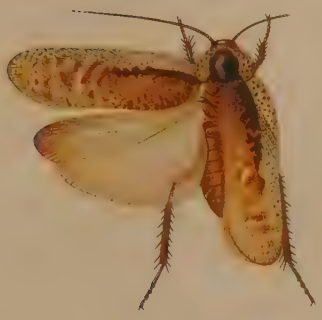
Morphna maculata.

10



Homalopteryx basifera.

8



Molytria inquinata.

9

Homalopteryx maindroni.

11

Ataxigamia bicolor.

FAM. BLATTIDÆ.

SUBFAM. EPILAMPRINÆ.

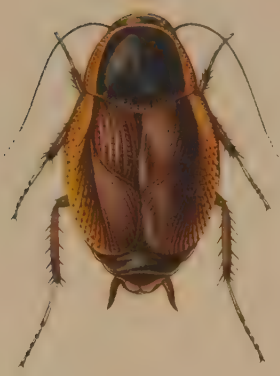
2

Audreia pulchra. ♀

1

Rhicnoda natatrix.

2a



Audreia pulchra. ♂

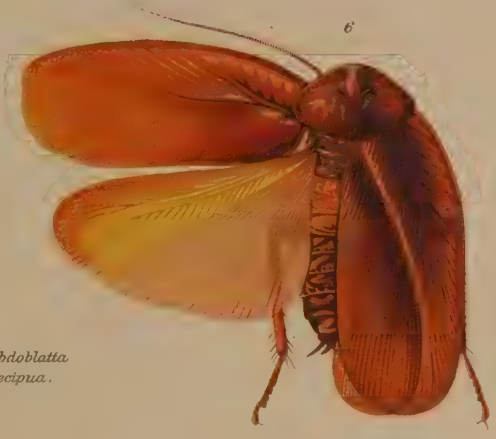
4

Pseudophophoraspis nebulosa.

5

Rhabdoblatta praecipua.

6

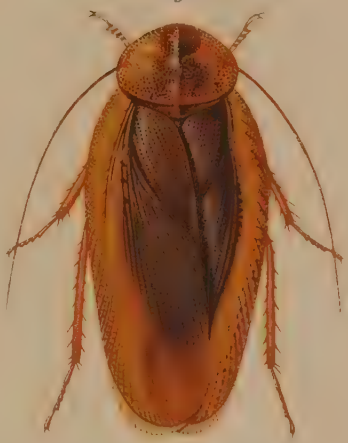


Epilampra goliath.

7

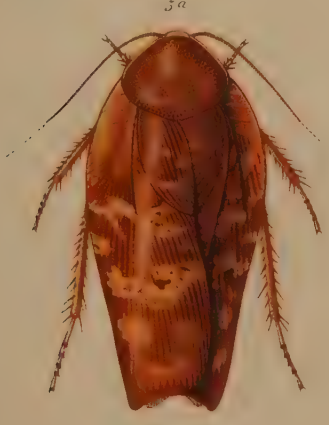
Epilampra brevis.

3



Pseudophoraspis fruhstorferi.

5a



Rhabdoblatta praecipua.

8

Epilampra conferta

9

Eustegasta buprestoides

FAM. BLATTIDÆ

SUBFAM. EPILAMPRINÆ

16. Genus AÜDREIA, nov. gen.

Characters. — Differs from *Calolampra* by the reduced tegmina of the ♂, which fail to reach the apex of the abdomen and by the tegmina of the ♀, which are sub-quadrate or absent.

Geographical distribution of species. — India, Australia, Central and South America, West Indies.

1. **A. pulchra, nov. sp.** (1). — **Pl. 2, Figs. 2, 2a.**	Nilghiris.
2. *A. truncata*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 178 (1865).	New S. Wales
3. *A. biolleyi*, Saussure, Rev. Suisse Zool. Vol. 3, p. 347, pl. 9, f. 8 (1895).	C. America.
4. *A. carinulata*, Saussure, ibidem, p. 347, pl. 9, f. 9 (1895).	C. America.
5. *A. cicatricosa*, Rehn, Trans. Amer. Ent. Soc. Vol. 29, p. 275 (1903).	Costa Rica.
6. *A. hamiltoni*, Rehn, ibidem, p. 274 (1903).	Cuba.
7. *A. heusseriana*, Saussure, Rev. Zool. (2), Vol. 16, p. 321 (1864); Mém. Hist. Nat. Mexique, Blatt, p. 134, pl. 2, f. 24 (1864).	Uruguay.
8. **A. catharina, nov. sp.** (2).	Brazil.

17. Genus TRIBONOIDEA, Shelford

Tribonoidea, Shelford, Jahresb. Ver. Naturk. Wiesbaden, Vol. 61, p. 29 (1908).

Characters. — Pronotum with disc cucullate, anteriorly more arcuate than posteriorly, covering vertex of head and with slightly reflected margin. Tegmina and wings considerably exceeding the apex of the abdomen. Mediastinal vein of tegmina laminate beneath. Posterior portion of wings relatively small. Supra-anal lamina (♂) bilobed, exceeding the sub-genital lamina. Two genital styles. Cerci very short. Femora with their posterior margins beneath unarmed, the anterior margins sparsely armed. Tarsi elongate, posterior metatarsus biseriately spined beneath, pulvilli minute.

Geographical distribution of species. — Peru.

1. *T. oniscosoma*, Saussure Rev. Suisse Zool. Vol. 3, p. 339 (1895). *T. seydi*, Shelford, Jahresb. Ver. Naturk. Wiesbaden, Vol. 61, p. 30 (1908).	Peru.

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(1) **A. pulchra, nov. sp.** — *Male.* — Head piceous, vertex with a testaceous line, genæ and mouth parts testaceous. Pronotum with the disc fusco-castaneous, the anterior and lateral margins testaceous, rufo-punctate. Tegmina short, not reaching beyond the fifth abdominal tergite, venation well-marked closely reticulated, mediastinal area punctate, testaceous, rest of tegmina castaneous with fuscous spots, mediastinal and radial veins at base piceous. Wings reduced to corneous scales. Abdomen above piceous, laterally testaceous and fusco-punctate, supra-anal lamina sub-quadrate, apex cleft. Abdomen beneath piceous, sub-genital lamina slightly asymetrical, margined with testaceous, with two slender styles. Cerci moderate. Legs castaneous, front femora with four or five spines on anterior margin beneath; formula of apical spines 1/0, 1/0, 1/0, no genicular spine on front femora. Posterior tarsi very long, pulvilli minute, apical; metatarsi, second and third joints spined beneath. Arolia minute.

Female. — Larger. Entirely apterous. Pronotum posteriorly truncate; thorax margined laterally with fusco-punctate testaceous. Abdomen above fusco-marmorate, beneath piceous. Cerci very short, trigonal, nitid above with a testaceous line, hirsute below. Supra-anal lamina sub quadrate, apex faintly emarginate. Length: (♂) 15 mm., (♀) 19 mm.; length of tegmina 7-9 mm.; pronotum: (♂) 5 mm. × 5.5 mm., (♀) 5 mm. × 7.2 mm. Nilghiris, Coonoor (Maindron, Paris Museum).

(2) **A. catharina, nov. sp.** — *Male.* — Rufo-testaceous, a castaneous macula on the frons. Pronotum posteriorly produced obtusely, fusco-punctate, a castaneous lyrate marking on the disc. Tegmina not extending beyond the fourth abdominal tergite, with a few castaneous points, venation well-marked, not reticulated. Wings slightly shorter than tegmina, posterior part reduced, venation reticulated. Abdomen above fusco-marmorate, beneath castaneous, supra-anal lamina shortly trigonal, exceeded by the sub-genital lamina which is asymmetrical and produced, deeply grooved on the right side for the reception of the solitary style. Cerci piceous. Femora and coxæ rufo-testaceous, tibiæ castaneous. Femora strongly armed, front femora on anterior margin beneath with five or six spines succeeded distally by piliform setæ, formula of apical spines 2/1. 1/1. 1/0, no genicular spines on front femora. Tarsi rather short, pulvilli large, posterior metatarsi barely equal in length to the succeeding joints, the pulvilli of the second and third joints occupying the entire extent of the joints, with two spines on each side.

Female. — Similar, but pronotum less produced posteriorly, tegmina quadrate, not extending beyond the first abdominal tergite; wings reduced to corneous scales, without venation; supra-anal lamina produced with rounded angles, apex not emarginate. Length: (♂) 19 mm., (♀) 22 mm.; length of tegmina: (♂) 10 mm., (♀) 6 mm.; pronotum 6-7 mm. × 7.8-9 mm. Brazil, Santa Catharina (Oxford Museum).

18. Genus PSEUDOPHORASPIS, Kirby

Pseudophoraspis. Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 275 (1903).

Characters. — Eyes rather close together. Pronotum completely covering vertex of head, subcucullate, posteriorly obtusely produced. Tegmina and wings fully developed in both sexes, their apices rounded or slightly truncate. Femora moderately armed beneath. Tarsi long, posterior metatarsi longer than the succeeding joints, biseriately spined beneath, its pulvillus apical, remaining joints with large pulvilli, entirely unarmed.

Geographical distribution of species. — Tonkin, Malay Peninsula, Sunda Islands, Philippines.

1. **P. fruhstorferi, nov. sp.** (1). — **Pl. 2, Fig. 3.** — Tonkin.
2. *P. nebulosa*, Burmeister, Handb. Ent. Vol. 2, p. 505 (1838). — **Pl. 2, Fig. 4.** — Malay Peninsula, Borneo, Sumatra, Java.
   Blatta jaspidea, Serville, Hist. Nat. Ins. Orth. p. 88 (1839).
   Epilampra congrua, Walker, Cat. Blatt. Brit. Mus. p. 199 (1868).
   Epilampra scita, Walker, ibidem, p. 200 (1868).
   Epilampra conformis, Walker, ibidem, p. 200 (1868).
   Epilampra deplanata, Walker, ibidem, p. 201 (1868).
3. *P. miranda*, Shelford, Trans. Ent. Soc. Lond. p. 268 (1906). — Borneo.
4. *P. vasta*, Walker, Cat. Blatt. Brit. Mus. p. 195 (1868). — Philippines.
   Epilampra imperatoria, Stål. Oefv. Vet.-Akad. Förh. Vol. 34, nº 10, p. 36 (1877).

19. Genus HEDAIA, Saussure & Zehntner

Hedaia, Saussure & Zehntner, in Grandidier, Hist. Nat. Madag. Orth. Vol. 1, pp. 56, 66 (1895).

Characters. — Pronotum pentagonal, anterior border moderately arched, almost covering vertex of head, sides truncated, posteriorly strongly produced. Tegmina and wings fully developed, the former membranous, the latter with apex rounded or slightly angulate. Femora very sparsely armed, apical spines small. Tarsi long, posterior metatarsus biseriately spined beneath, second joint also biseriately spined beneath and with apical pulvillus.

Geographical distribution of species. — Madagascar.

1. *H. venusta*, Saussure & Zehntner, Hist. Nat. Madag. Orth. Vol. 1, p. 67, pl. 4, f. 43 (1895). — Madagascar.

20. Genus RHABDOBLATTA, Kirby

Rhabdoblatta, Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 276 (1903).

Characters. — Vertex of head freely exposed. Pronotum with its greatest width behind the middle, posteriorly strongly produced. Tegmina and wings fully developed, the latter (2) truncate at the

(1) **P. fruhstorferi, nov. sp.** — Closely allied to *P. nebulosa*, Burmeister, but the eyes much further apart; less convex; pronotum and tegmina less nitid; mediastinal vein of tegmina shining luteous; supra-anal lamina (♂) triangularly produced, apex not emarginate. Total length : (♂) 41 mm., (♀) 39 mm.; length of body : (♂) 33.2 mm., (♀) 34.5 mm.; length of tegmina : (♂) 35 mm., (♀) 33.5 mm.; pronotum : (♂) 9 mm. × 12 mm., (♀) 10 mm. × 14.3 mm. Tonkin, Montes Mauson (Fruhstorfer) (Oxford Mus.).

(2) Except in *R. yersiniana*, Saussure.

apex, the former sometimes truncate at the apex, sometimes rounded. Femora moderately armed. Tarsi long, posterior metatarsus biseriately spined beneath, second and third joints with no spines at their bases, pulvilli large with spines at the sides.

Geographical distribution of species. — India to Malay Archipelago. Brazil.

1. *R. praecipua*, Walker, Cat. Blatt. Brit. Mus. p. 196 (1868). — **Pl. 2, Figs. 5, 5a.** Ceylon.
2. *R. horologica*, Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 280 (1903). Khasia Hills
3. *R. imperatrix*, Kirby, ibidem, p. 274 (1903). Tonkin.
4. *R. regina*, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 20, p. 270 (1869). Cochin China.
5. *R. abdominalis*, Kirby, ibidem, p. 279 (1903). Tonkin.
6. *R. structilis*, Rehn, Bull. Amer. Mus. Nat. Hist. Vol. 26, p. 178 (1909). Sumatra.
7. *R. pfeifferae*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 188 (1865). Borneo.
8. *R. parvicollis*, Walker, Cat. Blatt. Brit. Mus. Suppl. p. 133 (1869). Borneo.
9. *R. buqueti*, Serville, Hist. Nat. Ins. Orth. p. 93 (1839). Java.
10. *R. javanica*, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 20, p. 269 (1869). Java.
11. *R. procera*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 192 (1865). Java.
    Epilampra borrei, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 23, p. 127, pl. 10, f. 44 (1873).
12. *R. pudica*, Stål, Oefv. Vet.-Akad. Förh. Vol. 34, n. 10, p. 35 (1877). Philippines.
13. *R. truncata*, Brunner von Wattenwyl, Abh. Senckenb. Ges. Frankf. Vol. 24, p. 207 (1898). Celebes.
14. *R. concinnula*, Walker, Cat. Blatt. Brit. Mus. Suppl. p. 134 (1869). Timor.
15. *R. yersiniana*, Saussure, Rev. Zool. (2), Vol. 16, p. 323 (1864). Brazil.
    Epilampra superba, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 191 (1865).

21. Genus DEROCARDIA, Saussure

Derocardia. Saussure, Rev. Suisse Zool. Vol. 3, p. 350 (1895).

Characters. — Similar to *Rhabdoblatta*, but apex of wings acutely pointed.

Geographical distribution of species. — Amboina.

1. *D. acutipennis*, Saussure, Rev. Suisse Zool. Vol. 3, p. 353, pl. 9, f. 11 (1895). Amboina.

22. Genus EPILAMPRA, Burmeister

Epilampra. Bürmeister, Handb. Ent. Vol. 2, p. 504 (1838).
Pœciloderrhis. Stål, Bih. Svensk. Vet.-Akad. Handl. Vol. 2, n. 13, p. 12 (1874).
Heterolampra. Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 276 (1903).

Characters. — Head with vertex exposed. Pronotum obtusely produced posteriorly. Tegmina and wings fully developed in both sexes, only rarely shorter than the body. Supra-anal lamina: (♂) sub-quadrate with obtuse angles, (♀) sub-bilobate, produced. Femora strongly armed. Tarsi long; posterior metatarsi exceeding the succeeding joints in length, biseriately spined throughout the greater part of their length, their pulvilli apical; second to fourth joints typically with small pulvilli and biseriately spined beneath.

Geographical distribution of species. — St. Helena, Asia, Africa, Australia, Central and South America, West Indies.

Palæarctic species :

1. *E. signatura*, Walker, Cat. Derm. Salt. Brit. Mus. Vol. 5, Suppl. Blatt. p. 13 (1871).	St. Helena.
2. *E. guttigera*, Shiraki, Ann. Zool. Japon. Vol. 6, Pt. 1, p. 21, pl. 2, f. 7 (1906).	Japan.

Ethiopian species :

3. *E. lyncea*, Gerstäcker, Mitt. Ver. Neuvorpomm. u. Rügen, Vol. 14, p. 53 (1883).	Cameroons.
4. *E. erubescens*, Gerstäcker, ibidem, p. 54 (1883).	Cameroons.
5. *E. camerunensis*, Borg, Bih. Svensk. Vet.-Akad. Vol. 28, Afd. 4, n. 10, p. 8, pl. 1, f. 3 (1904).	Cameroons.
6. *E. electa*, Borg, ibidem, p. 10, pl. 1, f. 4 (1904).	Cameroons.
7. *E. infinita*, Borg, ibidem, p. 11, pl. 1, f. 1 (1904).	Cameroons.
8. *E. sjöstedti*, Borg, ibidem, p. 12, pl. 1, f. 5 (1904).	Cameroons.
9. *E. borgi* (nom. nov.). *E. pallida*, Borg, Bih. Svensk. Vet.-Akad. Vol. 28, Afd. 4, n. 10, p. 13, pl. 1, f. 6 (1904).	Cameroons.
10. *E. minuta*, Borg, ibidem, p. 14, pl. 1, f. 4 (1904).	Cameroons.
11. *E. stipata*, Walker, Cat. Blatt. Brit Mus. p. 208 (1868).	Sierra Leone.
12. *E. conspicua*, Walker, ibidem, p. 67 (1868).	Lake N'gami.
13. *E. hybrida*, Saussure, Rev. Suisse Zool. Vol. 3, p. 358 (1895).	Lake N'gami.
14. *E. punctipennis*, Saussure, ibidem, p. 356, pl. 9, f. 12 (1895).	Zanzibar.
15. *E. angulata*, Saussure, Soc. Ent. Zurich, Vol. 6, p. 25 (1891). *E. angulata*, Saussure & Zehntner, in Grandidier, Hist. Nat. Madag. Orth. Vol. 1, p. 58 pl. 2, f. 21 (1895).	Madagascar.
16. *E. trilobata*, Saussure, Soc. Ent. Zurich, Vol. 6, p. 25 (1891). *E. trilobata*, Saussure & Zehntner, in Grandidier, Hist. Nat. Madag. Orth. Vol. 1, p. 60, pl. 2, f. 24 (1895).	Madagascar.
17. *E. punctulata*, Saussure, Soc. Ent. Zurich, Vol. 6, p. 25 (1891). *E. punctulata*, Saussure & Zehntner, in Grandidier, Hist. Nat. Madag. Orth. Vol. 1, p. 63, pl. 2, f. 22, 23 (1875).	Madagascar.
18. *E. malagassa*, Saussure & Zehntner, ibidem, p. 65, pl. 2, f. 25 (1895).	Madagascar.
19. *E. cincta*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 172 (1865).	Africa (?).

Oriental species :

20. *E. lurida*, Burmeister, Handb. Ent. Vol. 2, p. 505 (1838). *Blatta cribricollis*, Serville, Hist. Nat. Ins. Orth. p. 93 (1839).	India, Java, Borneo, Celebes.
21. *E. sculpturata*, Bolivar, Ann. Soc. Ent. Fr. p. 297, pl. 10, f. 8 (1897).	Trichinopoly.
22. *E. lineaticollis*, Bolivar, ibidem, p. 298 (1897).	Trichinopoly.
23. *E. punctata*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 173 (1865).	Ceylon.
24. *E. subsparsa*, Walker, Cat. Blatt. Brit. Mus. p. 205 (1868).	Ceylon.
25. *E. excelsa*, Navás, Bol. Soc. Aragon, Vol. 3, p. 131 (1904).	Himalayas.
26. *E. imitans*, Brunner von Wattenwyl, Ann. Mus. Stor. Nat. Genova, Vol. 33, p. 29, pl. 1, f. 10 (1893).	Tenasserim.
27. *E. marmorata*, Brunner von Wattenwyl, ibidem, p. 29 (1893).	Burma.
28. *E. annandalei*, Shelford, Rec. Indian Mus. Vol. 3, p. 127 (1909).	Lower Burma.
29. *E. olivacea*, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 20, p. 267 (1869). *E. immaculata*, Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 279 (1903).	Cochin China, Tonkin.
30. *E. monticola*, Kirby, ibidem, p. 277 (1903).	Tonkin.
31. *E. pallida*, Kirby, ibidem, p. 278 (1903).	Tonkin.
32. *E. trongana*, Rehn, Proc. U. S. Nat. Mus. Vol. 27, p. 548 (1904).	Lower Siam.
33. *E. moloch*, Rehn, ibidem, p. 550 (1904).	Lower Siam.

34. *E. saussurei*, Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 277 (1903). China.
E. puncticollis, Saussure, Rev. Suisse Zool. Vol. 3, p. 359 (1895).
35. *E. alligata*, Walker, Cat. Blatt. Brit. Mus. p. 71 (1868). Hong Kong.
E. munda, Walker, ibidem, p. 203 (1868).
E. isochroma, Walker, ibidem, p. 204 (1868).
36. *E. sinensis*, Walker, ibidem, p. 197 (1868). Hong Kong.
37. *E. inconspicua*, Brunner von Wattenwyl, Nouv. Syst. des Blatt. p. 186 (1865). Philippines.
38. *E. insueta*, Walker, Cat. Blatt. Brit. Mus. p. 202 (1868). Philippines.
39. *E. pandens*, Walker, ibidem, p. 204 (1868). Philippines.
40. *E. curta*, Walker, ibidem, p. 205 (1868). Philippines.
41. *E. pustulata*, Walker, ibidem, p. 206 (1868). Philippines.
42. *E. manillensis*, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, Vol. 20, p. 268 (1869). Philippines.
43. *E. cribellata*, Stâl, Oefv. Vet.-Akad. Förh. Vol. 34, n° 10, p. 34 (1877). Philippines.
44. *E. rustica*, Stâl, ibidem, p. 34 (1877). Philippines.
E. mutica, Kirby, Syn. Cat. Orth. Vol. 1, p. 121 (1904).
45. *E. plebeia*, Stâl, Oefv. Vet.-Akad. Förh. Vol. 34, n° 10, p. 34 (1877). Philippines.
46. *E. cyrtophthalma*, Stâl, ibidem, p. 35 (1877). Philippines.
47. *E. tagalica*, Stâl, ibidem, p. 35 (1877). Philippines.
E. trivialis, Stâl, ibidem, p. 35 (1877).
E. caliginosa, Stâl, ibidem, p. 35 (1877).
48. *E. lugubrina*, Stâl, ibidem, p. 35 (1877). Philippines.
49. *E. meticulosa*, Stâl; ibidem, p. 35 (1877). Philippines.
50. *E. ferruginosa*, Stâl, ibidem, p. 35 (1877). Philippines.
51. *E. staeli*, Kirby, Ann. Mag. Nat. Hist. (7), Vol. 12, p. 277 (1903). Philippines.
E. puncticollis, Stâl, Oefv. Vet.-Akad. Förh. Vol. 34, n° 10 p. 34 (1877).
52. *E. inclarata*, Walker, Cat. Blatt. Brit. Mus. p. 198 (1868). Borneo.
53. *E. quadrinotata*, Walker, ibidem, p. 209 (1868). Borneo.
54. *E. puncticollis*, Walker, ibidem, p. 74 (1868). Borneo.
55. *E. varia*, Walker, ibidem, Suppl. p. 130 (1869). Borneo.
E. varia, Shelford, Trans. Ent. Soc. Lond. p. 500, pl. 30, f. 9 (1906).
56. *E. geminata*, Brunner von Wattenwyl, Abh. Senckenb. Ges. Frankf. Vol. 24, p. 208 (1898). Borneo.
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69. *E. laticollis*, Walker, Cat. Blatt. Brit. Mus. p. 203 (1868). Australia.
70. *E. pectinata*, Saussure, Mém. Soc. Sc. Phys. Nat. Genève, vol. 20, p. 271 (1869). Australia.
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91. *E. heydeniana*, Saussure, ibidem, p. 323 (1864). — Brazil.
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101. *E. testacea*, Brunner von Wattenwyl, ibidem, p. 187 (1865). — Brazil.
102. *E. ferruginea*, Brunner von Wattenwyl, ibidem, p. 187 (1865). — Brazil.
103. *E. subconspersa*, Walker, Cat. Blatt. Brit. Mus. p. 71 (1868). — Brazil.
104. *E. adjuncta*, Walker, ibidem, p. 72 (1868). — Brazil.
105. *E. repanda*, Walker, ibidem, p. 73 (1868). — Brazil.
106. *E. caliginosa*, Walker, ibidem, p. 207 (1868). — Brazil.
107. *E. conferta*, Walker, ibidem, p. 207 (1868). — **Pl. 2, Fig. 8.** — Brazil.
108. *E. basistriga*, Walker, ibidem, p. 211 (1868). — Brazil (?).

109. *E. abdomen-nigrum*, De Geer, Mém. Ins. Vol. 3, p. 538, pl. 44, f. 5 (1773). Brazil, Surinam, W. Indies.
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112. *E. latifrons*, Saussure & Zehntner, Biol. Centr. Amer. Orth. Vol. 1, p. 66 (1893). « S. America. »
113. *E. burmeisteri*, Guérin, in Ramon de la Sagra, Hist. Cuba, Ins. p. 345 (1857). Cuba.
E. burmeisteri, Saussure, Mém. Mexique, Blatt. p. 131, pl. 2, f. 25 (1864).
114. *E. insularis*, Bolivar, Mém. Soc. Zool. Fr. Vol. 1, p. 128 (1888). Cuba.
115. *E. cubensis*, Bolivar, ibidem, p. 127 (1888). Cuba.
116. *E. caraibea*, Saussure & Zehntner, Biol. Centr. Amer. Orth. Vol. 1, p. 65 (1893). Cuba.
117. *E. sabulosa*, Walker, Cat. Blatt. Brit. Mus. p. 70 (1868). Haiti.
118. *E. microspila*, Walker, ibidem, p. 208 (1868). Haiti.

Doubtful species :

119. *E. elegans*, Eschscholtz, Entomographien, p. 84 (1822). Philippines.
120. *E. acutipennis*, Serville, Hist. Nat. Ins. Orth. p. (1839). Habitat (?).

23. Genus EUSTEGASTA, Gerstäcker

Eustegasta. Gerstäcker, Mitt. Ver. Vorpomm. Vol. 14, p. 53 (1883).
Compsoblatta. Saussure, Soc. Ent. Zurich, Vol. 6, p. 9 (1891).

Characters. — Size small. Head with the vertex freely exposed. Pronotum nitid, impunctate, posteriorly produced triangularly, sides deflexed. Tegmina and wings fully developed in both sexes, the former seriate-punctate at base; mediastinal vein of wings very long and giving off many rami to anterior margin. Supra-anal lamina (♂) surpassed by the sub-genital lamina which is asymmetrical and with two styles, in the ♀ the supra-anal lamina is variable but usually of the typical Epilamprine shape. Femora most sparsely armed with one or two spines only on the margins beneath. Tarsi very long, metatarsi biseriately spined beneath, pulvilli apical, second and third tarsal joints with a few spines.

Geographical distribution of species. — East and West Africa, Madagascar.

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E. poecila, Schaum, Peters' Reise Mossamb. Zool. Vol. 5, p. 109, pl. 7, f. 2 (1862).
2. *E. obsoleta*, Kirby, Ann. Mag. Nat. Hist. (7), Vol. 5, p. 287 (1900). Nyasaland.
3. *E. micans*, Saussure & Zehntner, Rev. Suisse Zool. Vol. 3, p. 17 (1895). Zanzibar.
4. *E. buprestoides*, Walker, Cat. Blatt. Brit. Mus. p. 76 (1868). — **Pl. 2, Fig. 9.** Fernando Po, Cameroons.
5. *E. carabidina*, Walker, ibidem, p. 76 (1868). Sierra Leone.
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7. *E. agrilidina*, Shelford, Ann. Mag. Nat. Hist. (7), Vol. 19, p. 47 (1907). French Congo.
8. *E. variegata*, Shelford, ibidem, p. 47 (1907). French Congo.
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13. *E. suava*, Saussure, ibidem, p. 26 (1891). Madagascar.
14. *E. pulchella*, Saussure, ibidem, p. 10 (1891). Madagascar.
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15. *E. lepida*, Saussure & Zehntner, Rev. Suisse Zool. Vol. 3, p. 16 (1895). Madagascar.
16. *E. blanda*, Saussure & Zehntner, ibidem, p. 16 (1895). Madagascar.

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notabilis, Walk. (*g. Molytria*)	7
notata, Brunn. v. W. (*g. Thorax*)	5
Notolampra (genus), Sauss.	4
nudiventris, Sauss. (*g. Molytria*)	7
obliqua, Walk. (*g. Pinaconota*)	5
obscura, Tepp. (*g. Calolampra*)	10
obscurifrons, Stål (*g. Rhicnoda*)	9
obsoleta, Kirby (*g. Eustegasta*)	17
olivacea, Sauss. (*g. Epilampra*)	14
oniscosoma, Sauss. (*g. Tribonoidea*)	11
opaca, Walk. (*g. Epilampra*)	16

Pages

Opisthoplatia (genus), Brunn. v. W. 8
orientalis, Burm. (*g. Opisthoplatia*) 8
oxyptera, Walk. (*g. Apsidopis*) 6

pallens, Serv. (*g. Phlebonotus*) 5
pallida, Borg (*g. Epilampra*) 14
pallida, Kirby (*g. Epilampra*) 14
pallida, Brunn. v. W. (*g. Phoetalia*) 8
pandens, Walk. (*g. Epilampra*) 15
pantherina, Blanch. (*g. Phoraspis*) 4
papua, Sauss. (*g. Epilampra*) 15
Paraphoraspis (genus), Brunn. v. W. 4
pardalina, Walk. (*g. Calolampra*) 10
parvicollis, Walk. (*g. Rhabdoblatta*) 13
patinifera, Bol. (*g. Homalopteryx*) 7
paula, Tepp. (*g. Calolampra*) 10
pectinata, Sauss. (*g. Epilampra*) 15
pedisequa, Rehn (*g. Calolampra*) 10
pelewensis, Sauss. (*g. Homalopteryx*) 8
pellucens, Thunb. (*g. Phoraspis*) 3
perplexa, Shelf. (*g. Molytria*) 7
perplexa, Tepp. (*g. Epilampra*) 15
pfeifferae, Brunn. v W. (*g. Rhabdoblata*) 13
Phlebonotus (genus), Sauss. 5
Phœtalia (genus), Stål. 8
Phoraspis (genus), Serv. 3
picta, Drury (*g. Phoraspis*) 4
pictetiana, Sauss. (*g. Opisthoplatia*) 8
Pinaconota (genus), Sauss. 5
plana, Brunn. v. W. (*g. Morphna*) 6
Planes (genus), Sauss. 5
plebeia, Stål (*g. Epilampra*) 15
plena, Walk. (*g. Epilampra*) 15
plicata, Nav. (*g. Rhicnoda*) 9
poecila, Schaum (*g. Eustegasta*) 17
Pœciloderrhis (genus), Stål 13
polyspila, Walk. (*g. Morphna*) 6
porcellana, Sauss. (*g. Thorax*) 5
praecipua, Walk. (*g. Rhabdoblatta*) 13
procera, Brunn. v. W. (*g. Rhabdoblatta*) 13

Pages

propria, Walk. (*g. Calolampra*) 10
proxima, Brunn. v.W. (*g. Epilampra*) 16
Pseudophoraspis (genus), Kirby 12
pudica, Stål (*g. Rhabdoblatta*) 13
pulchella, Sauss. (*g. Eustegasta*) 18
pulchra, Shelf. (*g. Aüdreia*) 11
punctata, Brunn. v. W. (*g. Epilampra*) 14
punctata, Sauss. (*g. Notolampra*) 4
puncticollis, Walk. (*g. Epilampra*) 15
puncticollis, Sauss. (*g. Epilampra*) 15
puncticollis, Stål (*g. Epilampra*) 15
punctifera, Walk. (*g. Morphna*) 6
punctipennis, Sauss. (*g. Epilampra*) 14
punctulata, Sauss. (*g. Epilampra*) 14
pustulata, Walk. (*g. Epilampra*) 15

quadrata, Sauss. (*g. Compsolampra*) 6
quadrinotata, Walk. (*g. Epilampra*) 15

ramifera, Walk. (*g. Morphna*) 7
reflexa, Sauss. & Zehntn. (*g. Rhicnoda*) 9
regina, Sauss. (*g. Rhabdoblatta*) 13
repanda, Walk. (*g. Epilampra*) 16
Rhabdoblatta (genus), Kirby 12
Rhicnoda (genus), Brunn. v. W. 9
ridleyi, Kirby (*g. Epilampra*) 15
rufovittata, Schoenh. (*g. Phoraspis*) 4
rugosa, Brunn. v W. (*g. Rhicnoda*) 9
rustica, Stål (*g. Epilampra*) 15

sabulosa, Walk. (*g. Epilampra*) 17
saravacensis, Shelf. (*g. Epilampra*) 15
saussurei, Kirby (*g. Epilampra*) 15
scita, Walk. (*g. Pseudophoraspis*) 12
sculpturata, Bol. (*g. Epilampra*) 14
seydi, Shelf. (*g. Tribonoidea*) 11
shelfordi, Kirby (*g. Morphna*) 6
sicca, Walk. (*g. Pinaconota*) 5
signatura, Walk. (*g. Epilampra*) 14
sinensis, Walk. (*g. Epilampra*) 15
sjöstedti, Borg (*g. Epilampra*) 14
socia, Stål (*g. Epilampra*) 16

Pages

sodalis, Walk. (*g. Epilampra*) 16
spinulosa, Brunn. v.W. (*g. Rhicnoda*) 9
splendens, Sauss. (*g. Eustegasta*) 17
staeli, Kirby (*g. Epilampra*) 15
stigmosa, Gig.-Tos (*g. Epilampra*) 16
stipata, Walk. (*g. Epilampra*) 14
strigifrons, Walk. (*g. Homalopteryx*) 8
structilis, Rehn (*g. Rhabdoblatta*) 13
suava, Sauss. (*g. Eustegasta*) 18
subconspera, Walk. (*g. Epilampra*) 16
subsparsa, Walk. (*g. Epilampra*) 14
substrigata, Walk. (*g. Epilampra*) 16
superba, Brunn. v. W. (*g. Epilampra*) 13

tagalica, Stål (*g. Epilampra*) 15
tatei, Tepp. (*g. Ataxigamia*) 9
tatei, Tepp. (*g. Calolampra*) 10
templetonii, Kirby (*g. Homalopteryx*) 8
tepperi, Kirby (*g. Calolampra*) 10
terranea, Walk. (*g. Rhicnoda*) 9
testacea, Brunn. v.W. (*g. Epilampra*) 16
Thorax (genus), Sauss. 4
Tribonoidea (genus), Shelf. 11
trilobata, Sauss. (*g. Epilampra*) 14
trivialis, Stål (*g. Epilampra*) 15
trongana, Rehn (*g. Epilampra*) 14
truncata, Brunn. v. W. (*g. Aüdreia*) 11
truncata, Brunn. v. W. (*g. Rhabdoblatta*) 13

unicolor, Burm. (*g. Phoraspis*) 4

varia, Walk. (*g. Epilampra*) 15
variegata, Shelf. (*g. Eustegasta*) 17
vasta, Walk. (*g. Pseudophoraspis*) 12
venusta, Sauss. (*g. Eustegasta*) 18
venusta, Sauss. & Zehntn. (*g. Hedaia*) 12
verticalis, Burm. (*g. Epilampra*) 16

wallacei, Shelf. (*g. Apsidopis*) 6

yersiniana, Sauss. (*g. Rhabdoblatta*) 13

EXPLANATION OF THE PLATES

Plate 1

Fig. 1. *Phoraspis convexa*, Thunberg.
— 1*a*. — — — Posterior tarsus.
— 2. *Notolampra gibba*, Thunberg. Wing of male.
— 3. *Phlebonotus pallens*, Serville. Wing of male.
— 4. — — — Wing of female.
— 5. *Apsidopis oxyptera*, Walker.
— 6. *Compsolampra liturata*, Serville.
— 7. *Morphna maculata*, Brunner von Wattenwyl.
— 7*a*. — — — — Posterior tarsus.
— 8. *Molytria inquinata*, Stål. Male.
— 9. *Homalopteryx maindroni*, nov. sp.
— 10. — *basifera*, Walker. Posterior tarsus.
— 11. *Ataxigamia bicolor*, nov. sp.

Plate 2

Fig. 1. *Rhicnoda natatrix*, Shelford. Female.
— 2. *Aüdreia pulchra*, nov. gen. et sp. Female.
— 2*a*. — — — — Male.
— 3. *Pseudophoraspis fruhstorferi*, nov. sp.
— 4. — *nebulosa*, Burmeister. Posterior tarsus.
— 5. *Rhabdoblatta praecipua*, Walker.
— 5*a*. — — — Posterior tarsus.
— 6. *Epilampra goliath*, Shelford.
— 7. — *brevis*, Brunner von Wattenwyl. Posterior tarsus.
— 8. — *conferta*, Walker.
— 9. *Eustegasta buprestoides*, Walker.

Oxford, 15th December 1909.

HYMENOPTERA

FAM. FORMICIDÆ

SUBFAM. DORYLINÆ

HYMENOPTERA

FAM. FORMICIDÆ

SUBFAM. DORYLINÆ

par C. EMERY

AVEC I PLANCHE NOIRE

Le plus anciennement décrit des Dorylinæ est le mâle mentionné par Linné, dans le *Museum Ludovicae Ulricae Reginae,* sous le nom de *Vespa helvola*, plus tard, dans le *Systema Naturae* (ed. 12), sous celui de *Mutilla helvola.* En faisant ce changement de nom générique, le maître de la nomenclature zoologique avait décidé de l'affinité qui devait s'imposer aux entomologistes pour plus d'un demi-siècle.

Fabricius avait fondé le genre *Dorylus* sur l'espèce linnéenne. Leach sépara les Dorylida des Mutillida, mais il les considérait comme faisant partie de la tribu des Mutillarides.

Lepeletier de Saint-Fargeau, par une divination de classificateur plutôt que par une argumentation sérieuse, plaça les mâles connus sous les noms de *Dorylus* et de *Labidus* comme « genres provisoirement rapprochés de la famille des Hétérogynides » (Formicides) (1). Haliday était disposé à reconnaître cette parenté avec les Fourmis, mais il jugeait prudent de ne pas se prononcer ; il sépara les Dorylidæ comme famille à part et les mit entre les Mutillides et les Formicides.

En 1840 parut la *Monographie des Dorylides*, de Shuckard ; cet entomologiste clairvoyant décrivit les nombreuses espèces des genres représentés exclusivement par des mâles et un petit nombre de formes d'ouvrières des genres *Anomma* et *Typhlopone,* qu'il prit pour des femelles ; il attribua avec doute les *Anomma* aux *Dorylus* et les *Typhlopone* aux *Labidus*, faisant remarquer les analogies qui font ressembler les *Thynnus* aux *Dorylides*.

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(1) *Hist. Nat. Ins. Hym.* Vol. 1, p. 223 (1836).

Westwood, au contraire, considérait avec raison les *Typhlopone* et les *Anomma* comme des ouvrières de Fourmis et, à tort, comme n'ayant rien de commun avec les Dorylides (1).

A cette époque se place une erreur qui a retardé de beaucoup la solution du problème des Dorylides. Westwood et Shuckard avaient décrit des *Typhlopone* qui avaient été trouvés dans des barils de sucre, provenant soi-disant des Indes occidentales; ces auteurs en avaient fait six espèces différentes. Le genre *Typhlopone* apparaissait ainsi sur le terrain de l'entomologie, avec une erreur indélébile, du moins pour longtemps; cette erreur a été la cause de la fausse attribution de Shuckard des mâles-*Labidus* aux *Typhlopone*, attribution qui persista lorsqu'il fut prouvé que les *Typhlopone* étaient des ouvrières de Fourmis. Cette fable n'a pu être rectifiée qu'en 1895, lorsque je reconnus que les six espèces de Westwood et de Shuckard étaient fondées sur des exemplaires de taille différente et tous de la même espèce, qui se trouvait être d'Afrique !

Dix ans plus tard parut l'observation fondamentale de Savage qui avait vu plusieurs *Dorylus* marcher dans une colonne d'*Anomma* (2). Fréd. Smith, en prenant note de cette observation, ne la trouvait pas suffisante et exprimait le doute, que les Doryles étaient peut-être parasites des *Anomma*, au lieu d'être leurs mâles. Il ajoutait toutefois que, si l'opinion de Savage « prove to be correct, we may reasonably expect that *Labidus* may prove to be the male of *Eciton* » (3). Cette supposition devait être confirmée par Sumichrast (1868) (4), puis par Hetschko (5), Wilhelm Müller (6), etc.

Jerdon avait observé en Inde la sortie des *Dorylus* accompagnés par des *Typhlopone*, sortant des mêmes trous. Dans une lettre remarquable à Fred. Smith, il écrit à propos des femelles inconnues : « The only other conclusion is that the female always remains apterous, and is impregnated in the nest » (7). Gerstäcker avait justement décrit deux ans auparavant une femelle aptère et aveugle de Java, sous le nom de *Dichthadia glaberrima*, qu'il supposait être la femelle de *Dorylus* et de *Typhlopone*.

Depuis lors, les observations vont en se multipliant (8). En 1877, je pouvais donc comprendre dans la sous-famille des Dorylines à peu près tout ce qui fait l'objet de cette monographie.

Ænictus n'avait pas encore été trouvé avec ses ouvrières : Gleadow observa en 1890 un vol d'*Ænictus*; ils étaient accompagnés par des *Typhlatta*, leurs ouvrières présumées (9).

La découverte des femelles aptères et plus ou moins dichthadiformes de plusieurs espèces de *Dorylus*, d'*Eciton* et d'*Ænictus* (10), la constatation que le genre *Leptanilla* doit faire partie de la sous-famille des Dorylinæ (11) et, enfin, la trouvaille des mâles minimes de ce genre faite tout récemment par le Dr Santschi (12), sont des faits plus ou moins importants qui ont contribué à rendre la connaissance des Dorylines ce qu'elle est aujourd'hui. Il n'y a plus un problème des Dorylines, il y a des questions, des problèmes de détail, qui ne sont pas plus aisés à débrouiller pour cela.

Les Dorylines sont en quelque sorte comme les Termites : plus encore que les Termites, la plupart des espèces se cachent dans les profondeurs du sol et n'apparaissent que de temps à autre, pour accompagner leurs mâles, ou quelques-unes, pour des expéditions de chasse et pour déménager.

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(1) *Ann. Mag. Nat. Hist.* Vol. 6, p. 81-85 (1841).
(2) *Proc. Acad. Natur. Sc. Philad.* Vol. 4, p. 200 et suiv. (1850).
(3) *Cat. Hym. Brit. Mus.* Vol. 6, p. 200 (1858).
(4) *Trans. Amer. Ent. Soc.* Vol. 2, p. 39 (1868).
(5) Mayr, *Wien. Ent. Zeit.* Vol. 5, p. 33 (1886).
(6) *Kosmos*, Vol. 1, p. 81-93 (1886).
(7) *Trans. Ent. Soc. Lond.* (3), Vol. 2, p. 93 (1865).
(8) Voyez pour l'histoire de la question des Doryles : Gerstäcker. *Stett Ent. Zeit.* Vol. 33, p. 254-269 (1872).
(9) Forel, *Ann. Soc. Ent. Belg.*, C. R. Séance 7 juin 1890.
(10) *Dorylus :*
Emery, *Bull. Soc. Ent. Ital.* Vol. 19, p. 343 et suiv. (1887); *Zool. Jahrb., Syst.* Vol. 8, p. 697 et suiv. (1895); Ern. André, *Bull. Mus. Hist. Nat.* p. 364 et suiv., Paris, (1900); Brauns, *Zeitschr. f. Hym. u. Dipt.* Vol. 3, p. 294 (1903).
Eciton :
Forel, *Ann. Soc. Ent. Belg.* Vol. 43, p. 443, 444 (1899); Wheeler, *Amer. Nat.* Vol. 34, p. 563 et suiv. (1900).
Ænictus :
Emery, *Bull. Soc. Ent. Ital.* Vol. 33, p. 43-47 (1901).
(11) Emery, *Archivio Zool.* Vol. 2, p. 107 et suiv. (1904).
(12) Santschi, *Rev. Suisse Zool.* Vol. 15, p. 305-313 (1907).

Dans un mémoire publié en 1895 (1), et dans mes travaux successifs j'ai discuté les limites de la sous-famille des Dorylines. J'ai étudié les organes copulateurs mâles des Fourmis et j'ai trouvé que les Dorylines avaient des rapports inattendus avec une partie des Ponérines, non seulement dans l'appareil copulateur et dans nombre de détails de l'organisation des mâles, mais encore dans la structure des ouvrières et des femelles; entre autres j'ai décrit une femelle avec des caractères de dichthadia d'*Acanthostichus quadratus*, Emery.

J'ai donc réuni ce groupe de Ponérines avec les Dorylines, interprétant ces ressemblances comme dues à des relations phylogénétiques.

Les Dorylines proprement dits sont un ensemble extrêmement différencié qui se rattache de loin au tronc primitif des Fourmis, c'est-à-dire aux Ponérines, pris dans le sens le plus étendu, par des groupes de genres épars. Ces groupes n'offrent pas une suite continue, mais sont une série d'épaves laissées par le courant de la phylogénèse. Les opinions les plus divergentes se sont fait jour sur la valeur de ces jalons. Forel, Wheeler et autres sont unanimes sur ce point, que ces genres de Ponérines sont parents des Dorylines, mais ils ne s'accordent pas avec moi, quant au degré de la parenté.

Tous sont d'accord contre moi, dans le sens qu'il vaut mieux laisser les groupes qui ont pour types *Cerapachys*, *Acanthostichus* et *Cylindromyrmex* avec les Ponérines.

Je ne veux pas m'obstiner à prétendre d'avoir raison contre l'unanimité de mes collègues en myrmécologie (2), et j'adopte un moyen terme que je viens de publier dans la 8e partie de mes « Beiträge zur Monographie der Formiciden des paläarktischen Faunengebietes (3) ». Les Ponérines y sont partagées en trois sections, et la première de ces sections, qui porte le nom de nom de « Prodorylinæ », est justement composée des genres qui relient les Dorylines avec les Ponérines.

* * *

Dans la liste et synonymie des espèces, j'ai adopté les signes suivants :

☿ désigne l'ouvrière de toutes les formes, depuis le soldat jusqu'au pygmée;
☤ désigne le soldat, lorsqu'il a une structure caractéristique;
♀ désigne la femelle;
♂ désigne le mâle.

SUBFAM. DORYLINÆ (LEACH)

Dorylida. Leach, in Brewster Edinb. Encycl. Vol. 9, art. Entomology, p. 147 (1815).

Dorylidæ. Haliday, Trans. Linn. Soc. Lond. Vol. 7, p. 331 (1836); Hym. Brit. Lond. Alysia, Fasc. 2 (1839); Shuckard, Mon. Dorylid., Ann. Nat. Hist. Vol. 5, p. 188 (1840); Emery, Bull. Soc. Ent. Ital. Vol. 9, p. 71 (1877).

Dorylinæ. Dalla Torre, Catal. Hym. Vol. 7, p. 1 (1893).

Dorylini. Emery, Zool. Jahrb. Syst. Vol. 8, p. 764, ex parte (1895).

Dorylidæ. Ashmead, The Canad. Entom. p. 381, ex parte (1905).

(1) *Zool. Jahrb.*, etc., loc. cit.; *Ann. Soc. Ent. Belg.* Vol. 45, p. 32 (1901); *Archivio Zool.* loc. cit. (1904).

(2) Ashmead est le seul, à ma connaissance, qui ait attribué à la famille des Dorylides (pour lui c'est une famille et les Formicoidea une superfamille) une extension plus grande. Mais aucun myrmécologiste compétent ne suivra sa fantastique classification (*The Canad. Entom.*, 1905, p. 381 et suiv.).

(3) *Deutsche Ent. Zeitschr.*, 1909, p. 355.

Caractères. — *Ouvrière et soldat.* — Epistome presque toujours très court et n'étant limité par aucune suture.

Arêtes frontales verticales, ne recouvrant pas l'insertion des antennes.

Antennes étant souvent de moins de douze articles, insérées près de la bouche et tout près l'une de l'autre.

Palpes tout au plus de trois articles, quelquefois (*Leptanilla*) d'un seul article.

Sutures du corselet plus ou moins effacées; mésonotum touchant l'épinotum sur le dos, ne laissant pas de place pour le métanotum.

Eperons pectinés, quand ils ne sont pas rudimentaires.

Segment postpétiolaire n'étant pas séparé dans tous les genres du segment suivant par un étranglement; chez *Eciton*, *Ænictus* et *Leptanilla*, au contraire, étroit et représentant le deuxième article d'un pédoncule du gastre de deux articles.

Aiguillon développé.

Femelle. — Aptère et dichthadiiforme; différant considérablement de l'ouvrière par la forme de la tête, ainsi que par celle du pétiole et du postpétiole.

Epistome comme chez l'ouvrière.

Arêtes frontales plus ou moins écartées.

Antennes de dix à douze articles.

Elle est privée d'ocelles et ses yeux ne sont pas plus développés que ceux des ouvrières; elle est aveugle quand les ouvrières le sont.

Segmentation du corselet plus ou moins réduite; sans vestige d'ailes, ou avec un rudiment d'insertion alaire (*Dorylus*).

Le postpétiole n'est pas séparé du segment suivant, même dans les genres ou le pédoncule du gastre, chez l'ouvrière, est de deux articles.

Le gastre est très long et volumineux.

Mâle. — Epistome et arêtes frontales à peu près comme la femelle.

Mandibules développées, grandes en général; très courtes chez *Leptanilla*.

Antennes de treize articles; scape court, mais dépassant la longueur du deuxième article chez *Leptanilla*, beaucoup plus long dans les autres genres.

Des yeux bien développés et des ocelles.

Corselet normalement segmenté, portant des ailes.

Conditions du pétiole et du postpétiole à peu près comme chez la femelle.

Armure génitale entièrement rétractile (*Dorylini, Ecitini*) ou saillante et non rétractile (*Leptanilla*); lame subgénitale fendue ou fourchue; cerci nuls.

Larves plus ou moins cylindriques, à poils courts, sans poils d'accrochage.

Nymphes nues (*Dorylus*, *Eciton*) ou revêtues d'un cocon (*Eciton burchelli*, d'après W. Müller).

* * *

La sous-famille des Dorylinæ se partage naturellement en trois tribus.

TABLE DES TRIBUS

Ouvrière et soldat. — *Pygidium tridenté, avec une impression médiane; palpes maxillaires et labiaux de deux articles; joues n'ayant pas de carène longitudinale; postpétiole n'étant pas séparé du segment suivant par un étranglement.*

Femelle. — *Cloaque ouvert, laissant à découvert l'aiguillon; hypopygium fourchu dépassant considérablement le pygidium; corselet segmenté.*
Mâle. — *Aile antérieure à ptérostigma très étroit et allongé; cellule radiale ouverte, très allongée, une cellule cubitale fermée; armure génitale rétractile* . . . . . 1. Tribus Dorylini, Forel.

Ouvrière et soldat. — *Pygidium simple; palpes maxillaires de deux ou trois articles, labiaux de deux; joue offrant une carène longitudinale, limitant externement la fosse antennaire; postpétiole séparé ordinairement du segment suivant par un étranglement, de sorte que le pédoncule du gastre est constitué de deux articles (excepté dans le genre* Cheliomyrmex*).*
Femelle. — *Cloaque couvert par le pygidium; l'hypopygium pas notablement proéminent.*
Mâle. — *Ptérostigma pas très étroit; cellule radiale pas très allongée; une ou deux cellules cubitales fermées; armure génitale rétractile* . . 2. Tribus Ecitini, Forel.

Ouvrière. — *Pygidium simple; palpes maxillaires et labiaux uni-articulés; joues sans carène; pédoncule du gastre constitué de deux segments.*
Femelle. — *Cloaque ouvert, laissant à découvert l'aiguillon; hypopygium lobé dépassant le pygidium; corselet traversé par une suture passant en arrière de la première paire de pattes, n'offrant pas de segmentation dorsale en arrière de cette suture.*
Mâle. — *Aile antérieure n'offrant ni ptérostigma ni nervures; armure génitale toujours saillante, non rétractile* . . . . . 3. Tribus Leptanillini, Emery.

1. TRIBUS DORYLINI (Forel)

Dorylii. Forel, Ann. Soc Ent. Belg. Vol. 37, p. 163 (1893).

Ne comprend qu'un seul genre.

1. Genus DORYLUS, Fabricius

Dorylus. Fabricius, Ent. Syst. Vol. 2, p. 194 (1793); Shuckard, Ann. Nat. Hist. Vol. 5, p. 287 (1840); Emery, Zool. Jahrb. Syst. Vol. 8. p. 697 (1895).
Typhlopone. Westwood, Introd. Class. Ins. Vol. 2, p. 219 (1840); Shuckard, Ann. Nat. Hist. Vol. 5, p. 261 (1840); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 6, p. 110 (1858).
Dichthadia. Gerstäcker, Stett. Ent. Zeit. Vol. 24, p. 85, pl. 1, f. 2 (1863).
Alaopone. Emery, Ann. Mus. Stor. Nat. Genova, Vol. 16, p. 274 (1881).
Vespa. Linné.
Mutilla. Linné, Lamarck.

Caractères. — *Ouvrière et soldat.* — Le polymorphisme atteint dans ce genre, entre toutes les Fourmis, son plus haut degré. L'on peut distinguer trois types d'individus, entre lesquels il y a passage graduel par des formes intermédiaires :

a) Exemplaires maxima, ou soldats. Tête énorme qui est plus large en avant ou du moins pas

plus étroite en avant qu'en arrière; les mandibules sont étroites, armées au bord médial d'un nombre de dents moindre que chez les ouvrières proprement dites; l'épistome représente un bord étroit le long de la bouche; les antennes comptent le nombre normal d'articles (douze à neuf selon l'espèce).

Fig. 1

b) Exemplaires moyens ou petits, ouvrières. Tête beaucoup plus petite et plus courte, mais pas rétrécie en avant; épistome plus ou moins avancé en feston au-dessus de la bouche; antennes comme dans la catégorie précédente.

c) Pygmées. Tête courte rétrécie en avant; épistome fortement saillant; antennes avec un nombre d'articles réduit (sept au minimum).

Toutes les trois formes sont aveugles.

Arêtes frontales verticales, rapprochées entre elles.

Suture promésonotale distincte; suture méso-épinotale effacée. Epinotum toujours inerme.

Pétiole en forme de nœud. Postpétiole rétréci antérieurement, non séparé ou indistinctememt séparé du segment suivant.

Pygidium impressionné et terminé par trois pointes.

Tibias postérieurs avec un éperon pectiné.

Femelle. — Forme de dichthadia vraiment typique.

Tête à lobe occipital bombé, partagé par un sillon médian.

Épistome comme chez le soldat.

Arêtes frontales pas élevées, éloignées entre elles.

Mandibules étroites sans dents.

Pas d'yeux; à leur place tout au plus une fossette.

Antennes de onze articles, ou de douze articles dans le sous-genre *Dichthadia*.

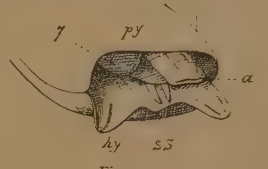

Fig. 2

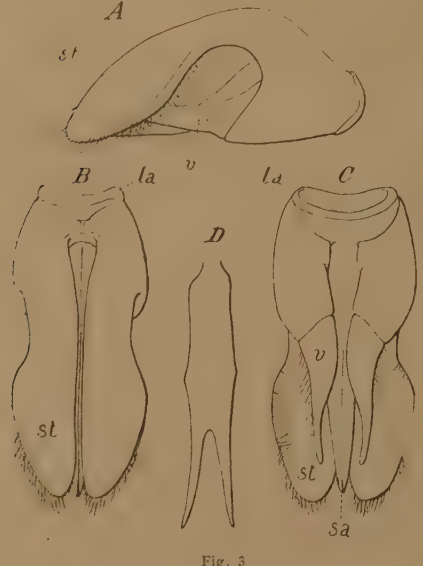

Fig. 3

Corselet segmenté, mais le mésonotum n'offrant pas de différenciation en scutum et scutellum. Insertion alaire rudimentaire.

Pétiole large, ses angles postérieurs prolongés en pointe mousse. Postpétiole plus court que le segment suivant, mais non séparé du gastre par un étranglement.

Le pygidium et l'hypopygium laissent voir les parties contenues dans le cloaque, c'est-à-dire les stigmates de la dixième paire, le segment anal et tout l'appareil de l'aiguillon. Pygidium sans impression, l'hypopygium dépasse de beaucoup le pygidium et forme deux lobes ou appendices.

Mâle. — Epistome court, prolongé en arrière entre les arêtes frontales courtes et divergentes.

Mandibules sans dents.

Antennes de treize articles; scape égal au tiers ou au quart du funicule; celui-ci sétacé.

Le scutum du mésonotum surplombe le pronotum; scutellum pas proéminent. A toutes les pattes le fémur est aplati, le tibia étroit.

Aile avec le ptérostigma étroit et mal limité, placé vers le tiers apical; la cellule radiale allongée et ouverte; une cellule cubitale fermée; ordinairement une nervure récurrente (dans le sous-genre *Rhogmus* et dans un petit nombre de cas d'anomalie il y en a deux).

Pétiole en forme de nœud ou de soucoupe, la cavité de la soucoupe étant tournée vers le postpétiole.

Pospétiole non séparé du gastre qui est long, cylindrique ou en massue.

Pygidium arrondi ou fendu au bord postérieur (*Rhogmus fimbriatus*).

Armure génitale totalement rétractile : lamina annularis étroite; stipes et volsella simples; pas de lacinia. Plaque sous-génitale profondément fourchue.

Ethologie. — En dehors du sous-genre *Anomma*, toutes les espèces de *Dorylus* mènent une vie souterraine et ne viennent qu'exceptionnellement à la surface du sol : ainsi, par exemple, dans les inondations ou pour accompagner leurs mâles, quand ils prennent le vol. Leurs sociétés sont très peuplées. Les ouvrières et les soldats font des expéditions souterraines pour la chasse des insectes et d'autres petits animaux, pour exploiter les tas de fumier, les cadavres et probablement les nids des termites. Les mâles viennent la nuit à la lumière. La recherche des volumineuses et pesantes femelles aptères est difficile; c'est pour cela que ces femelles sont rares dans les collections. Il est à noter que dans tous les exemplaires décrits jusqu'ici, à l'exception de la femelle de *D. fimbriatus* décrite par Brauns, les articles terminaux des tarses manquent; je suppose que les ouvrières les ont arrachés pendant les déménagements souterrains, lorsqu'elles tirent la reine colossale par tous les membres à travers des galeries étroites.

Type du genre : *Dorylus helvolus*, Linné.

Distribution géographique. — Toute l'Afrique. En Asie, les côtes de la Méditerranée, l'Hindoustan, l'Indochine et les îles de Bornéo, Sumatra, Java et Célèbes. La plupart des espèces habitent l'Afrique; seulement trois espèces appartenant à des sous-genres différents vivent dans la région indienne. L'on ne trouve de *Dorylus* ni d'autre genre de Dorylines à Madagascar (1).

TABLE DES SOUS-GENRES

a) Ouvrière et soldat

A. *Antennes de douze articles chez les soldats et les grandes et moyennes ouvrières* . . . . . 1. Subgenus Dichthadia, Gerstäcker.

A'. *Antennes de onze ou dix articles.*

B. *Pygidium avec une impression demi-circulaire à bords tranchants. Antennes de onze articles.*

Antennes courtes et épaisses, les articles du funicule, excepté le dernier, tous fortement plus courts que gros. 2. Subgenus Dorylus. Fabricius (s. str.).

Antennes allongées, les articles du funicule du moins en partie plus longs qu'épais . . . . . 3. Subgenus Anomma, Shuckard.

B'. *Impression du pygidium pas nettement bordée.*

Dent sous-apicale des mandibules simple; antennes de onze articles . . . . . 4. Subgenus Typhlopone, Westwood.

Dent sous-apicale des mandibules double ou tronquée . 5. Subgenus Rhogmus, Shuckard.

A''. *Antennes de neuf articles* . . . . . 6. Subgenus Alaopone, Emery.

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(1) Voyez pour la détermination des espèces les tables analytiques : Emery, *Zool. Jahrb. Syst.* Vol. 8, p 706-710 (1895), ♀ ♂; *Mem. Accad. Sc. de Bologna* (5), Vol. 9, p. 427, 428 (1901) ♀.

b) Femelle

A. *Antennes de douze articles* . . . . . 1. Subgenus DICHTHADIA, Gerstäcker.

A'. *Antennes de onze articles.*

Hypopygium en forme de plaque fendue, rétrécie en arrière . 2. Subgenus DORYLUS, Fabricius(s.str.).
3. Subgenus ANOMMA, Shuckard.
5. Subgenus RHOGMUS, Shuckard.

Hypopygium large, formant deux lobes écartés en arrière . 6. Subgenus ALAOPONE, Emery.

c) Mâle

A. *Mandibules larges à la base et prolongées en pointe, à bord médial fortement échancré* . . . . . 1. Subgenus DICHTHADIA, Gerstäcker.

A'. *Mandibules autrement conformées.*

B. *Pétiole plus large que long, creusé en soucoupe à sa face postérieure.*

Mandibules moins de quatre fois plus longues que larges. 2. Subgenus DORYLUS, Fabricius(s.str.).

Mandibules plus de quatre fois plus longues que larges. 3. Subgenus ANOMMA, Shuckard.

B'. *Pétiole presque carré ou arrondi.*

C. *Mandibules environ trois fois plus longues que larges* . 4. Subgenus TYPHLOPONE, Westwood.

C'. *Mandibules beaucoup plus larges.*

Aile avec une deuxième nervure récurrente. . . . 5. Subgenus RHOGMUS, Shuckard.

Pas de deuxième nervure récurrente . . . . . 6. Subgenus ALAOPONE, Emery.

1. SUBGENUS DICHTHADIA, GERSTÄCKER

Dichthadia. Gerstäcker, Stett. Ent. Zeit. Vol. 24, p. 85-93 (1863).
Typhlopone. Fred. Smith, Journ. Linn. Soc. Lond. Vol. 2, p. 70 (1857).

Caractères. — *Ouvrière et soldat.* — Mandibules en forme de sabre, sans dent chez le soldat; chez l'ouvrière, avec une dent au tiers apical.

Epistome pas proéminent chez la petite ouvrière.

Antennes du soldat et de la grande ouvrière de douze articles; chez les petites ouvrières (de 4 1/2 à 3 mm.), elles sont de onze ou dix articles.

Femelle. — Antennes de douze articles.

Hypopygium en forme de fourche étroite.

Mâle. — Mandibules larges rétrécies en pointe, avec le bord médial fortement échancré.

Pétiole arrondi, cubique.

Stipes étroit, bossu, les deux moitiés de l'armure convergeant en arrière vers la ligne médiane; lame subgénitale comme chez *Dorylus*.

Type du sous-genre : *Dichthadia glaberrima,* Gerstäcker = *Dorylus levigatus* (Fred. Smith).

Distribution géographique de l'espèce. — Bornéo, Sumatra, Java, Célèbes, Birmanie. Tenasserim.

1. *D. levigatus* (Fred. Smith), Journ. Linn. Soc. Lond. Vol. 2, p. 70 (1857), ♀; Cat. Hym. Brit. Mus. Vol. 6, p. 112, pl. 8, f. 4 (1858) (*Typhlopone laevigata*). Iles de la Sonde, Célèbes.

D. levigatus, Emery; Zool. Jahrb. Syst. Vol. 8, p. 729 (1895), ♀; Mem.

Accad. Sc. Bologna (5), Vol. 9, p. 419, pl. 1, f. 26-29 (1901); Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 464 (1901), ♀ ♀ ♂; Bingham, Fauna Brit. India, Hym. Vol. 2, p. 3, f. 4, 5 (1903).

Dichthadia glaberrima, Gerstäcker, Stett. Ent. Zeit. Vol. 24, p. 93. pl. 1, f. 2 (1863), ♀.

D. klugi, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 25, p. 448, pl. 1, f. 10 (1887), ♂; Zool. Jahrb. Syst. Vol. 8, p. 729, f. T, U (1895).

var. breviceps, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 27, p. 488 (1889), ♀; Mem. Accad. Sc. Bologna (5), Vol. 9, p. 419, pl. 1, f. 30 (1901). Birmanie, Tenasserim.

2. Subgenus DORYLUS, Fabricius (s. str.)

Dorylus. Fabricius, Ent. Syst. Vol, 2, p. 194 (1793); Emery, Zool. Jahrb. Syst. Vol. 8, p. 701 (1895).

Dichthadia. Gerstäcker (part.), Stett. Ent. Zeit. Vol. 33, p. 267 (1872).

Caractères. — *Ouvrière et soldat.* — Tête des soldats et des grandes ouvrières subrectangulaire, échancrée par derrière; chez les pygmées à antennes de sept à huit articles rétrécie en avant.

Epistome des très petites ouvrières proéminent au-dessus de la bouche.

Mandibules du soldat pointues, avec une dent mousse près de la base; celles des ouvrières bifides, c'est-à-dire ayant près de pointe une dent subapicale.

Antennes de onze articles; les pygmées les ont de dix à sept articles; articles du funicule, sauf le dernier, plus gros que longs.

Pygidium avec une impression demi-circulaire à bords tranchants.

Femelle. — Tête avec un sillon médian peu profond.

Antennes de onze articles.

Le bord postérieur du pygidium est creusé en son milieu d'une encoche, bordée de chaque côté d'une saillie.

Hypopygium en forme de plaque large à structure compliquée, à bords relevés et profondément fendue.

Mâle. — Tête médiocrement bombée en arrière; yeux gros.

Mandibules à pointe aiguë, moins de quatre fois plus longues que larges.

Pétiole plus large que long, creusé en forme de soucoupe à sa face postérieure.

Armure génitale remarquablement constante dans sa forme dans tout le sous-genre : stipes fortement convexe; sur le profil il est étroit et très arqué à la base, un peu plus large à l'extrémité; les deux moitiés de l'armure, vues par la face dorsale, sont à peu près parallèles; volsella étroite, pointue; sagitta rétrécie et comprimée à l'extrémité. Lame subgénitale avec les branches de la fourche étroites, non aplaties.

Type du sous-genre : *Dorylus helvolus*, Linné.

Distribution géographique des espèces. — Toute l'Afrique, excepté les contrées qui s'étendent au Nord du Sahara.

2. *D. affinis*, Shuckard, Ann. Nat. Hist. Vol. 5, p. 316 (1840), ♂. Afrique tropicale.

D. affinis, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 6 (1859); Emery, Zool. Jahrb. Syst. Vol. 8, p. 719, f. H, I (1895), ♂; Mem. Accad. Sc. Bologna (5), Vol. 9, p. 417, 421, pl. 1, f. 1-8, 10, 11 (♀), pl. 2, f. 1-9 (larv. pup.) (1901).

D. planiceps, Haldeman, Proc. Acad. Nat. Sc. Philad. Vol. 4, p. 204 (1850), ♂.

Typhlopone oraniensis var. *brevinodosa*, Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 12, p. 737 (1862), ♀.

D. brevinodosus, Emery, Bull. Soc. Ent. Ital. Vol. 19, p. 349 (1887), ♀; Zool. Jahrb. Syst. Vol. 8, p. 717, f. F, 1, 2, 3 (1895).

var. abyssinica, Emery, Zool. Jahrb. Syst. Vol. 8, p. 717 (1895), ♀ (*D. brevinodosus* var.). — Abyssinie.

var. aegyptiaca, Mayr, Reise Novara, Formic. p. 76, nota (1865), ♂ (*D. aegyptiacus*). — Soudan, Abyssinie.

D. affinis var. *aegyptiaca*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 720 (1895), ♂; Ann. Mus. Stor. Nat. Genova, Vol. 38, p. 596, fig. (1897).

subsp. löwyi, Forel, Ann. Soc. Ent. Belg. Vol. 51, p. 202 (1907), ♂. — Zanzibar.

3. *D. atratus*, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 4, pl. 1, f. 15 (1859), ♂. — Afrique occident. tropicale.

D. atratus, Emery, Zool. Jahrb. Syst. Vol. 8, p. 722, f M, N (1895).

4. *D. braunsi*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 718, f. G (1895), ♀. — Afrique occident. : Liberia.

5. *D. brevipennis*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 721, f. K, L (1895), ♂; Mem. Accad. Sc. Bologna (5), Vol. 9, p. 424, pl. 1, f. 12 (1901), ♀♂. — Afrique orientale.

var. marshalli, Emery, Mem. Accad. Sc. Bologna (5), Vol. 9, p. 425, pl. 1, f. 13 (1901), ♀♂. — Mashonaland.

6. *D. depilis*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 720 (1895), ♂ (*D. affinis* var.). — Afrique occidentale : Kamerun.

7. *D. furcatus* (Gerstäcker), Stett. Ent. Zeit. Vol. 33, p. 267 (1872), ♀ (*Dichthadia furcata*). — Afrique australe.

D. furcatus, Emery, Bull. Soc. Ent. Ital. Vol. 19, p. 349, pl. 11, f. 8, 9 (1887).

8. *D. gribodoi*, Emery, Ann. Soc. Ent. Fr. Vol. 60, p. 560, pl. 15, f. 15 (1891); Zool. Jahrb. Syst. Vol. 8, p. 723, f. O (1895), ♂. — Afrique occidentale tropicale.

9. *D. helvolus* (Linné), Mus. Ludov. Ulr. p. 412 (1764), ♂ (*Vespa helvola*). — Afrique australe.

Mutilla helvola, Linné, Syst. Nat. (ed. 12), Vol. 1, p. 968 (1767), ♀.

D. helvolus, Fabricius, Ent. Syst. p. 365 (1793), ♂; Shuckard, Ann. Nat. Hist. Vol. 5, p. 315 (1840); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 5 (1859); Trimen, Proc. Ent. Soc. Lond. p. 24, 33, fig. (1880), ♀; Emery, Bull. Soc. Ent. Ital. Vol. 19, p. 350, pl. 11, f. 1-7 (1887), ♀♀♂; Zool. Jahrb. Syst. Vol. 8, p. 714, f. C, D, E (1895).

Mutilla dorylus, Lamarck, Hist. Nat. Anim. s. vert. Vol. 4, p. 101 (1817), ♂.

Typhlopone punctata, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 6, p. 112 (1858), ♀.

T. europaea, Roger, Berl. Ent. Zeitschr. Vol. 3, p. 248, pl. 7, f. 3 (1859), ♀.

D. planifrons, Mayr, Reise Novara, Formic. p. 74, pl 3, f. 21 (1865), ♂.

10. *D. mandibularis*, Mayr, Ent. Tidskr. Vol. 17, p. 228 (1896), ♂. — Kamerun.

11. *D. moestus*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 720 (1895), ♂. — Kamerun, Congo.

12. *D. politus*, Emery, Mem. Accad. Sc. Bologna (5), Vol. 9, p. 426, pl 1, f. 14-17 (1901), ♀. — Kamerun.

13. *D. spininodis*, Emery, ibidem, p. 426, pl. 1, f. 18-21 (1901), ♀. — Kamerun.

14. *D. stadelmanni*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 722 (1895), ♂. — Congo.

15. *D. staudingeri*, Emery, ibidem, p. 721 (1895), ♂. — Congo.

3. Subgenus ANOMMA, Shuckard

Anomma. Shuckard, Ann. Nat. Hist. Vol. 5, p. 326 (1840).
Sphegomyrmex. Imhoff, Verh. Naturf. Ges. Basel, Vol. 10, p. 175 (1852).
Alaopone (part.). Emery, Ann. Mus. Stor. Nat. Genova, Vol. 16, p. 274 (1881).

Caractères. — *Ouvrière et soldat.* — Tête large. Mandibules du soldat étroites, fortement courbées, avec une seule dent au milieu ; chez l'ouvrière et les formes intermédiaires entre l'ouvrière et le soldat avec plusieurs dents subapicales.

Epistome des petites ouvrières proéminent, en feston.

Antennes grêles de onze articles, excepté les ouvrières pygmées qui ont les antennes de dix à huit articles, avec les articles du funicule courts et épais.

Pattes longues et grêles.

Pygidium avec une impression demi-circulaire à bords tranchants.

Couleur foncée.

Femelle. — Tête grande avec un profond sillon médian; des petites fossettes à la place des yeux et des ocelles.

Antennes de onze articles.

Pygidium et hypopygium comme chez *Dorylus*, celui-ci en forme de plaque large profondément fendue, avec les bords latéraux élevés.

Mâle. — Occiput fortement bombé; yeux relativement petits.

Mandibules plus de quatre fois plus longues que larges.

Pétiole plus large que long, creusé en forme de soucoupe à sa face postérieure.

Du reste comme chez le sous-genre *Dorylus*.

Ethologie.— Les *Anomma*, dites par les Anglais « Driver Ants », au contraire des autres Doryles, se montrent à découvert la nuit et même en plein jour. Il n'y a que les rayons du soleil qu'elles évitent avec soin. Vosseler estime que la population d'un nid de *Dorylus nigricans* var. *molesta* atteint deux millions. Les *Anomma* habitent sous terre; de leur fourmillière partent des chemins ordinairement creusés et parfois couverts d'une voûte de terre, conduisant aux terrains de chasse. Il n'est pas de voyageur qui n'ait assisté à l'effroi qu'excitent les colonnes des drivers, non seulement sur le monde des insectes, mais sur tout ce qui est vivant; les grands animaux et même l'homme doivent être sur leurs gardes, à l'approche de ces terribles Fourmis.

Quand les environs de la fourmillière sont épuisés par des chasses mille fois répétées, les *Anomma* déménagent. Elles émigrent en masse avec larves, nymphes, reine, myrmécophiles, etc.; c'est dans ces hordes migratrices que l'on a le plus de chances de rencontrer les mâles des diverses espèces et particulièrement la femelle qui est unique au dire des indigènes.

Dans les expéditions de chasse aussi bien que dans les émigrations, les *Anomma*, quand elles marchent à découvert, les soldats et les ouvrières de forte taille constituent une arcade sur le chemin, sous laquelle le peuple menu, chargé de proie ou de larves peut passer en sûreté. Les soldats justifient ce nom, car ils sont prêts à attaquer l'ennemi avec acharnement et à défendre la colonne. D'après Savage ils ont en grande partie la direction de toutes les opérations. Les *Anomma* portent les nymphes et en général tous les fardeaux longitudinalement au-dessous du corps.

Les *Anomma* sont une branche du sous-genre *Dorylus*, modifiée par adaptation à la vie à découvert (1).

Type du sous-genre : *Anomma burmeisteri*, Shuckard = *Dorylus nigricans*, Illiger.

Distribution géographique des espèces. — L'Afrique équatoriale : la région qui comprend les bassins du Niger et du Congo est évidemment le foyer d'où a rayonné le groupe; c'est là que se trouvent réunies le plus d'espèces; dans l'Afrique orientale, du Soudan au Mozambique, l'on ne trouve que le *D. nigricans* var. *molesta*.

16. *D. emeryi*, Mayr, Ent. Tidskr. Vol. 17, p. 225 (1896), ♀. — Kamerun, Congo.
    var. pulsi, Forel, Ann. Soc. Ent. Belg. Vol. 48. p. 170 (1904), ♀. — Afrique occidentale.
    subsp. opaca, Forel, ibidem, Vol. 53, p. 58 (1909), ♀. — Bas Congo.
17. *D. funereus*, Emery, Zool. Jahrb. Syst. Vol. 8, p, 712 (1895), ♂ (*D. nigricans* var. *funereus*); Ann. Soc. Ent. Belg. Vol. 43, p. 461 (1899). — Côte d'Or.
18. *D. gerstaeckeri*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 713, pl. 17, f. 11 (1895), ♀. — Côte d'Or, Kamerun.
19. *D. kohli*, Wasmann, Zool. Jahrb. Suppl. 7, p. 669 (1904), ♀. — Congo.

(1) Voyez pour l'éthologie des *Anomma* : Savage, « On the habits of the Drivers or visiting ant of West Africa », *Trans. Ent. Soc. Lond.* Vol. 5, p. 1-15 (1847); *Proc. Acad. Nat. Sc. Philad.* Vol. 4, p. 195-202 (1850); Vosseler, « Die Ostafrikanischen Treiberameisen », *Der Pflanzer*, Tanga (Deutsch Ost-Afrika), N. 19, p. 289 302 (1905).

20. *D. nigricans*, Illiger, Mag. Insektenk. Vol. 1, p. 188 (1802), ♂. — Afrique occidentale, surtout la région au Nord des bouches du Niger.

D. nigricans, Fabricius, Syst. Piez. p. 427 (1804); Shuckard, Ann. Nat. Hist. Vol. 5, p. 124 (1840); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 7 (1859).

Anomma burmeisteri, Shuckard, Ann. Nat. Hist. Vol. 5, p. 326 (1840), ♀; Westwood, Ann. Mag. Nat. Hist. Vol. 6, p. 88, pl. 2, f. 4 (1841); Roger, Berl. Ent. Zeitschr. Vol. 5, p. 46 (1861); Emery, Ann. Soc. Ent. Fr. Vol. 60, p. 553 (1891).

D. nigricans burmeisteri, Emery, Zool. Jahrb. Syst. Vol. 8, p. 710-713, f. A, B (1895), ♀ ♂.

?*D. nigricans*, Ern. André, Bull. Mus. Hist. Nat. Paris, 1900, p. 364, fig. (1901), ♀.

var. molesta (Gerstäcker), Monatsb. Akad. Wiss. Berl. 1858, p. 262, ♀ (*Anomma molesta*); Peters' Reise Mossamb. Zool. Vol. 5, p. 562, pl. 32, f. 2 (1862). — Afrique orientale, depuis le Soudan jusqu'au Mozambique.

Anomma burmeisteri var. *molestum*, Emery, Ann. Soc. Ent. Fr. Vol. 60, p. 554 (1891), ♀.

D. nigricans var. *molestus*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 710 (1895), ♀.

Alaopone antinorii, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 16, p. 275, fig. (1881).

D. sp.? Waterhouse, Trans. Ent. Soc. Lond. p 6, fig. ♀ ♀ (1907) (1).

var. rubella (Savage), Proc. Acad. Nat. Sc. Philad. Vol. 4, p. 196 (1850), ♀ (*Anomma rubella*); Roger, Berl. Ent. Zeitschr. Vol. 5, p. 47 (1861). — Afrique occidentale.

Anomma pubescens, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 16, p. 273, nec Roger (1881), ♀.

Anomma burmeisteri var. *rubella*, Emery, Ann. Soc. Ent. Fr. Vol. 60, p. 554 (1891), ♀.

D. nigricans var. *rubellus*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 710 (1895), ♀.

subsp. arcens (Westwood), Trans. Ent. Soc. Lond. Vol. 5, p. 16, pl. 1, f. 3 (1847), ♀ (*Anomma arcens*). — Afrique occidentale.

Anomma burmeisteri subsp. *arcens*, Emery, Ann. Soc. Ent. Fr. Vol. 60, p. 554 (1891), ♀.

Dorylus nigricans subsp. *arcens*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 710 (1895), ♀.

Anomma pubescens, Roger, Berl. Ent. Zeitschr. Vol. 5, p. 47 (1861); Emery, Zool. Jahrb. Syst. Vol. 8, p. 711 (1895), ♀.

subsp. sjoestedti, Emery, Ann. Soc. Ent. Belg. Vol. 43, p. 461 (1899), ♀. — Kamerun.

Anomma nigricans subsp. *arcens*, Mayr, Ent. Tidskr Vol. 17, p. 225, nec Westwood (1896), ♀.

var. rufescens, Wasmann, Zool. Jahrb. Suppl. 7, p. 673 (1904), ♀. — Kamerun.

21. *D. stanleyi*, Forel, Ann. Soc. Ent. Belg. Vol. 53, p. 52 (1909), ♂. — Congo.

?*D. emeryi*, Forel, ibidem, p. 52 (1909), ♂.

22. *D. wilverthi*, Emery, ibidem, Vol. 43, p. 459 (1899), ♀. — Congo.

D. wilverthi, Forel, ibidem, Vol. 53, p. 51 (1909), ♂.

4. Subgenus TYPHLOPONE, Westwood

Typhlopone. Westwood, Introd. Class. Ins. Vol. 2, p. 219 (1840); Emery, Zool. Jahrb. Syst. Vol. 8, p. 701 (1895).

Cosmacetes. Spinola, Mem. Accad. Torino (2), Vol. 13, p. 70 (1851).

Caractères. — *Ouvrière et soldat.* — Mandibules avec trois dents, la sous-apicale simple.
Antennes de onze articles; chez les pygmées de dix à huit.
Pygidium avec impression pas nettement bordée.
Du reste comme le sous-genre *Dorylus*.

(1) D'après la figure et la description de l' ♀ ainsi que l'habitat (Uganda), je ne doute pas que ce soit la var. *molesta*.

Femelle. — Inconnue.

Mâle. — Mandibules au moins trois fois aussi longues que larges.

Pétiole cubique, plus ou moins arrondi; gastre très long, cylindrique.

Stipes resserré à la base, l'extrémité avec la face latérale concave; volselle allongée, atteignant presque l'extrémité du stipes. Lame subgénitale comme chez le sous-genre *Dorylus*.

Ethologie. — Renferme la forme la plus connue du genre *Dorylus*, commune dans les contrées du littoral méditerranéen en Afrique et en Asie. Vie entièrement souterraine (1).

Type du sous-genre : *Typhlopone fulva*, Westwood.

Distribution géographique des espèces. — L'Afrique sauf l'extrémité Sud, le littoral de la Syrie et d'une partie de l'Asie mineure, l'Hindoustan.

23. *D. fulvus* (Westwood), Introd. Class. Ins. Vol. 2, p. 219 (1840), ♀ (*Typhlopone fulva*). — Nord de l'Afrique, Syrie.

D. fulvus, Emery, Zool. Jahrb. Syst. Vol. 8, p. 723, f. Q (1895), ♀ ♂.
Typhlopone kirbyi, Shuckard, Ann. Nat. Hist. Vol. 5, p. 265 (1840), ♀.
T. twaitsi, Shuckard, ibidem, p. 326 (1840), ♀.
T. spinolae, Shuckard, ibidem, p. 327 (1840), ♀.
D. juvenculus, Shuckard, ibidem, p. 319 (1840), ♂; Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 9 (1859); Ern. André, Spéc. Hym. Eur. Vol. 2, p. 254, pl. 15, f. 10-12 (1882).
Typhlopone shuckardi, Westwood, Ann. Mag. Nat. Hist. Vol. 6, p. 88, pl. 2, f. 2 (1841), ♀.
T. dahlbomi, Westwood, ibidem, pl. 2, f. 3, (1841) ♀.
T. oraniensis, Lucas, Explor. Algérie, Vol. 3, p. 302, pl. 16, f. 11 (1846), ♀.
D. oraniensis, Ern. André, Spec. Hym. Europe, Vol. 2, p. 252, pl. 15, f. 1-4 (1882) ♀.
Cosmacetes homalinus, Spinola, Mem. Accad. Torino (2), Vol. 13, p. 70 (1851), ♀.
Typhlopone clausi, Joseph, Berl. Ent. Zeitschr. Vol. 26, p. 47 (1882), ♀.

subsp. badia. Gerstäcker, Monatsb. Akad. Wiss. Berlin, p. 261 (1858) (*D. badius*); Peters' Reise Mossamb. Zool. Vol. 5, p. 499, pl. 31, f. 14 (1862), ♂; *D. fulvus*, var. *badia*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 727, f. R (1895). — Afrique orientale.

subsp. dentifrons, Wasmann, Zool. Jahrb. Suppl. 7, p. 673 (1904), ♀. — Afrique occidentale, Kamerun.

subsp. glabrata, Shuckard, Ann. Nat. Hist. Vol. 5, p. 317 (1840), ♂ (*D. glabratus*); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 8 (1859). — Gambia.

24. *D. labiatus*, Shuckard, Ann. Nat. Hist. Vol. 5, p. 319 (1840), ♂. — Hindoustan.

D. labiatus, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 10 (1859); Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 464 (1901), ♀ ♂; Bingham, Fauna Brit. India, Hym. Vol. 2, p. 2, f. 1-3 (1903).
D. fulvus, subsp. *labiatus*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 728, f. S (1895).
D. hindostanus, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 3, pl. 1, f. 1, 16 (1859) ♂.
Typhlopone laeviceps, Fred. Smith, Scient. res. second Yarkand Miss. p. 13, f. 2 (1878) ♀.

2. Subgenus RHOGMUS, Shuckard

Rhogmus. Shuckard, Ann. Nat. Hist. Vol. 5. p. 323 (1840); Emery, Zool. Jahrb. Syst. Vol. 8, p. 702 (1895).

Caractères. — *Ouvrière et soldat.* — Mandibules armées à leur bord médial de deux dents dont la sous-apicale est bifide ou tronquée.

Antennes des soldats et des grandes ouvrières de onze (*D. fimbriatus*) ou dix articles (*D. fuscipennis*) (2); chez les pygmées de *D. fimbriatus* elles comptent de neuf à dix articles.

(1) Voyez pour l'éthologie de *Typhlopone* : Forel, *Eine myrmekologische Ferienreise in Tunesien und Ostalgerien;* Humbold, Vol. 9, n. 9 (1890)
(2) L'ouvrière de *D. fuscipennis* est inédite.

Pygidium avec impression pas nettement bordée.

Du reste comme le sous-genre *Dorylus*.

Femelle. — D'après la description et les figures de Brauns, la femelle de *D. fimbriatus* ressemble beaucoup à celle de *D. helvolus;* elle en diffère par le pygidium faiblement sinué à son bord postérieur et l'hypopygium largement fendu, les deux moitiés pointues à l'extrémité (1).

Mâle. — Mandibules larges et courtes.

Pétiole cubique, plus ou moins arrondi; gastre volumineux en forme de massue.

Pygidium long et poilu; celui de *D. fimbriatus* fendu.

Stipes renflé latéralement, tordu à l'extrémité. Lame subgénitale large et aplatie.

Aile antérieure avec une deuxième nervure récurrente.

Type du sous-genre : *Rhogmus fimbriatus*, Shuckard.

Distribution géographique des espèces. — Afrique équatoriale.

25. *D. fimbriatus* (Shuckard), Ann. Nat. Hist. Vol. 5, p. 325 (1840), ♂ (*Rhogmus fimbriatus*). Afrique équatoriale.
   Rhogmus fimbriatus, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 2 (1859).
   D. fimbriatus, Emery, Zool. Jahrb. Syst. Vol. 8, p. 736, f. AA, BB (1895), ♀ ♂; Mem. Accad. Sc. Bologna (5), Vol. 9, p. 419, pl. 1, f. 31-38 (1901), ♀; Brauns, Zeitschr. f. Hym. u. Dipt. Vol. 3, p. 294, fig. (1903), ♀.

26. *D. fuscipennis* (Emery), Ann. Soc. Ent. Fr. Vol. 60, p. 570 (1891), ♂ (*Rhogmus fuscipennis*). Côte d'Or, Kamerun.
   D. fuscipennis, Emery, Zool. Jahrb. Syst. Vol. 8, p. 737, f. CC, DD (1895), ♂.

27. *D. savagei*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 738, f. EE, FF (1895), ♂. Gabon, Congo.
   Rhogmus fuscipennis. Ern. André, Rev. Ent. Vol. 14, p. 5 (1895), ♂ (nec Emery).
   var. mucronata, Emery, Ann. Soc. Ent. Belg. Vol. 43, p. 463 (1899), ♂. Lagos.

6. Subgenus ALAOPONE, Emery

Alaopone. Emery (part.), Ann. Mus. Stor. Nat. Genova, Vol. 16, p. 274 (1881); Zool. Jahrb. Syst. Vol. 8, p. 702 (1895).

Shuckardia. Emery, Zool. Jahrb. Syst. Vol. 8, p. 703 (1895).

Caractères. — *Ouvrière et soldat.* — Antennes de neuf articles. L'existence de pygmées avec épistome avancé sur la bouche et antennes d'un nombre réduit d'articles n'est pas connue.

Du reste comme *Typhlopone*.

Femelle. — Antennes de onze articles.

Pygidium arrondi.

Hypopygium large, prolongé en deux lobes courts, arrondis, écartés entre eux.

Mâle. — Mandibules larges et courtes.

Pétiole cubique, plus ou moins arrondi; gastre cylindrique.

Armure génitale massive; stipes large et déprimé; volselle de forme variable. Lame subgénitale large et aplatie.

Aile antérieure avec une seule nervure récurrente.

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(1) Dernièrement Stitz a décrit une ♀ de Kamerun sans lui donner de nom (*Zool. Anzeig.* Vol. 35, p. 231, 232, f. 1-3, 1909). Il est probable qu'elle se rapporte au sous-genre *Rhogmus*.

Type du sous-genre : *Alaopone oberthueri*, Emery = *Dorylus orientalis*, Westwood.

Distribution géographique des espèces. — A peu près toute l'Afrique ; une espèce habite la région indienne continentale et insulaire.

28. *D. atriceps*, Shuckard, Ann. Nat. Hist. Vol. 5, p. 323 (1840), ♂. — Afrique occidentale.
D. atriceps, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 14 (1859); Emery, Zool. Jahrb. Syst. Vol. 8, p. 740, f. GG, HH (1895).
D. shuckardi, Ritzema, Tijdschr. v. Ent. Vol. 17, p. 182 (1874).
D. ritzemae, Dalla Torre, Wien. Ent. Zeit. Vol. 1, p. 80 (1892), ♂.
subsp. aethiopica, Emery, Zool. Jahrb. Syst. Vol. 8, p. 741, f. JJ, KK (1895), ♂; Forel, Ann. Soc. Ent. Belg. Vol. 51, p. 201 (1907), ♀. — Tunisie, Abyssinie.
D. atriceps, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 9, p. 386 (1877), ♂.

29. *D. attenuatus*, Shuckard, Ann. Nat. Hist. Vol. 5, p. 322 (1840), ♂. — Afrique occidentale.
D. attenuatus, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 13 (1859); Emery, Zool. Jahrb Syst. Vol. 8, p. 733, f. X, Y (1895).
var. acuminata, Emery, Ann. Soc. Ent. Belg. Vol. 43, p. 462 (1899), ♂. — Afrique Australe.
var. umbratipennis, Forel, ibidem, Vol. 53, p. 52 (1909), ♂. — Nini (?).

30. *D. conradti*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 734, pl. 16, f. 1-4, pl. 17, f. 7-10 (1895), ♀♀. — Togo.

31. *D. diadema*, Gerstäcker, Monatsb. Akad. Wiss. Berlin, p. 261 (1858), ♂; Peters' Reise Mossamb. Zool. Vol. 5, p. 500, pl. 31, f. 15 (1862). — Mozambique.
D. diadema, Emery, Zool. Jahrb. Syst. Vol. 8, p. 742, f. LL, MM (1895).
var. fusciceps, Emery, Ann. Soc. Ent. Belg. Vol. 43, p. 463 (1899), ♂. — Lac Nyassa, Congo.

32. *D. orientalis*, Westwood, Proc. Zool. Soc. Lond. Vol. 3, p. 72 (1835), ♂. — Hindoustan, Ceylan, Birmanie; d'après Bingham, dans les îles de Bornéo, Sumatra et Java.
D. orientalis, Shuckard, Ann. Nat. Hist. Vol. 5, p. 320 (1840); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl 1, f. 11 (1859); Emery, Zool. Jahrb. Syst. Vol. 8, p. 731, f. V, W (1895); Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 463 (1901), ♀ ♂; Bingham, Fauna Brit. India, Hym. Vol. 2, p. 4, f. 6, 7 (1903).
Typhlopone curtisi, Shuckard, Ann. Nat. Hist. Vol. 5, p. 265 (1840), ♀; Emery, Zool. Jahrb. Syst. Vol. 8, p. 730 (1895).
Alaopone oberthueri, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 16, p. 274, nota (1881), ♀.
subsp. fusca, Emery, ibidem, Vol. 27, p. 487 (1889), ♂; Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 463 (1901); Bingham, Fauna Brit. India Hym. Vol. 2, p. 5 (1903). — Birmanie, Himalaya.
subsp. longicornis, Suckard, Ann. Nat. Hist. Vol. 5, p. 321 (1840), ♂ (*D. longicornis*); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 12 (1859); Forel, Journ. Bombay Nat. Nat. Hist. Soc. Vol. 13, p. 463 (1901); Bingham, Fauna Brit. India, Hym. Vol. 2, p. 5 (1903). — Répandu avec le type dans toute l'Inde.

ESPÈCES DE GENRE DOUTEUX

— *Typhlopone westwoodi*, Shuckard, Ann. Nat. Hist. Vol. 5, p. 266 (1840). — Amérique méridionale.
— *Anomma erratica*, Fred. Smith, Journ. Linn. Soc. Lond. Vol. 8, p. 71 (1864). — Nouvelle-Guinée.

2. TRIBUS ECITINI (FOREL)

Ecitonii. Forel, Ann. Soc. Ent. Belg. Vol. 37, p. 163 (1893).

Caractères. — *Ouvrière et soldat.* — Arêtes frontales soudées avec l'épistome, s'infléchissant et se continuant en avant et extérieurement avec une carène de la joue qui entoure en dehors la fosse antennaire.

Pédicule du gastre composé de deux articles, excepté dans le genre *Cheliomyrmex ;* gastre petit, ovale ou fusiforme ; pygidium sans impression.

Femelle. — Cloaque couvert par le pygidium; hypopygium n'étant pas notablement proéminent et n'offrant pas d'appendice remarquable.

Mâle. — Aile antérieure avec un ptérostigma bien développé; cellule radiale fermée ou ouverte; une ou deux cellules cubitales.

Armure génitale rétractile, du moins dans les genres *Eciton* et *Ænictus*.

TABLE DES GENRES

a) Ouvrière et soldat

A. *Antennes de douze articles.*
Pédoncule du gastre d'un seul article, le postpétiole n'étant pas séparé du gastre par un étranglement distinct . . . . . 1. Genus CHELIOMYRMEX, Mayr.
Pédoncule du gastre de deux articles . . . . . 2. Genus ECITON, Latreille.
A'. *Antennes de dix articles; pas de vestige d'yeux* . . . . . 4. Genus ÆNICTUS, Shuckard.

b) Femelle

A. *Antennes de douze articles.* . . . . . 2. Genus ECITON, Latreille.
A'. *Antennes de dix articles* . . . . . 4. Genus ÆNICTUS, Shuckard.

c) Mâle

A. *Ptérostigma étroit; cellule radiale fermée; deux cellules cubitales fermées.* 2. Genus ECITON, Latreille.
A'. *Ptérostigma large; cellule radiale ouverte.*
Deux cellules cubitales fermées. . . . . . 3. Genus ÆNICTOGITON, Emery.
Une seule cellule cubitale fermée . . . . . 4. Genus ÆNICTUS, Shuckard.

1. GENUS CHELIOMYRMEX, MAYR

Cheliomyrmex. Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 20, p. 968 (1870); Ern. André, Rev. Ent. Vol. 6, p. 294 (1887).

Caractères. — *Ouvrière et soldat.* — Dimorphisme très prononcé, néanmoins il y a passage graduel entre les soldats et les ouvrières.

Epistome s'avançant un peu sur la bouche chez les petites ouvrières.

Arêtes frontales soudées entre elles; la carène des joues relativement courte.

Mandibules du soldat en forme de faucille, avec une longue dent au milieu et une deuxième plus courte placée entre celle-ci et la base; celles de l'ouvrière sont triangulaires avec une grande dent au milieu, séparée de la pointe par de petites dents.

Pas d'yeux.

Pétiole en forme d'écaille ou plutôt de nœud transversal, arrondi. Postpétiole beaucoup plus étroit que le segment suivant, en forme de cloche, n'étant séparé du gastre par aucun étranglement.

Ongles dentés.

Femelle et mâle inconnus. Je soupçonne toutefois que l'espèce décrite sous le nom de *Labidus morosus*, Fred. Smith, et qui a à peu près la même distribution géographique que l'unique espèce de *Cheliomyrmex*, est son mâle.

Le genre *Cheliomyrmex* est très proche d'*Eciton*, sous-genre *Labidus*, et surtout de l'*E. coecum*, Latreille.

Distribution géographique de l'espèce. — Mexique, Amérique centrale, Pérou.

1. *C. nortoni,* Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 20, p. 969 (1870). Mexique, Honduras.
C. nortoni, Ern. André, Rev. Ent. Vol. 6, p. 264 (1887) ; Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 185, pl. 2, f. 11 (1894) ; Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 23, p. 271, pl. 11, f. 4-9 (1907).
subsp. andicola, Emery. Bull Soc. Ent. Ital. Vol 26, p. 185 (1894), ♀. Panamarca : Pérou.

2. Genus ECITON, Latreille

Eciton. Latreille, Hist. Nat. Crust. Ins. Vol. 4, p. 130 (1802); ibidem, Vol. 13, p. 258 (1805); Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 160 (1855); Mayr, Wien. Ent. Zeit. Vol. 5, p. 33 (1886).
Labidus. Jurine, Nouv. Méth. Class. Hym. p. 282 (1807); Shuckard, Ann. Nat. Hist. Vol. 5, p. 196 (1840).
Formica (part.). Fabricius, Spec. Ins. (1781); Latreille, Fourmis (1802).
Myrmecia (part.). Fabricius, Syst. Piez. (1804).
Atta (part). Illiger, Mag. Insektenk. (1807).

Caractères. — *Ouvrière et soldat.* — Dimorphisme très prononcé, du moins dans certaines espèces; cependant il y a toujours passage graduel entre les soldats et les ouvrières.

Epistome très court. Arêtes frontales verticales, s'infléchissant pour encadrer l'insertion des antennes laquelle demeure entièrement découverte, et se continue avec la carène longitudinale de la joue qui limite extérieurement la fosse antennaire.

Mandibules de forme variable selon l'espèce.

Des yeux placés sur la moitié postérieure de la tête, n'ayant pas de facettes; ou point d'yeux.

Antennes de douze articles, avec funicule filiforme ou en massue.

Corselet ayant la suture pro-mésonotale distincte, la suture méso-épinotale plus ou moins effacée; l'épinotum parfois armé, parfois inerme.

Le pétiole étroit forme avec le postpétiole à peu près d'égale largeur un pédoncule de deux articles. Gastre petit, ovale.

Femelle. — Epistome, arêtes frontales et antennes comme chez l'ouvrière.

Mandibules étroites, pointues.

Pas d'yeux, dans le petit nombre de formes connues qui appartiennent à des espèces où les ouvrières sont aveugles.

Corselet étroit, incomplètement segmenté.

Pétiole de forme variable.

Postpétiole plus étroit que le segment suivant, mais pas distinct du gastre; celui-ci très volumineux. Chez les femelles en pleine fécondité, le gastre est distendu et laisse voir les plaques cornées des segments, séparées par la membrane intersegmentaire.

Fig. 4.

Mâle. — Epistome court, rarement proéminent ou muni de deux pointes.

Arêtes frontales s'infléchissant pour encadrer l'insertion de l'antenne; se prolongeant souvent en arrière en forme de bourrelet.

Mandibules étroites, ordinairement sans dents et courbées en faux.

Yeux et ocelles bien développés, parfois très gros; les ocelles placés au sommet de la tête.

Antennes de treize articles, avec scape court et funicule filiforme, aminci au bout.

Pronotum invisible en dessus; scutum du mesonotum voûté, parfois surplombant la tête; épinotum court, en pente.

L'aile antérieure a un ptérostigma étroit (plus large que celui de *Dorylus*, mais beaucoup plus étroit que celui d'*Ænictus*), la cellule radiale fermée, deux cellules cubitales et une cellule discoïdale.

Pétiole aplati ou creusé en dessus, en rectangle transversal ou en trapèze ou réniforme.

Gastre cylindrique ou en masssue; pygidium souvent comprimé latéralement et fendu dans le milieu.

Armure génitale : lamina annularis longue; le stipes forme une lame portée sur un pétiole; volselle à deux branches. Lame subgénitale profondément divisée dans son milieu, les deux moitiés à pointe aiguë.

Ethologie. — Les *Eciton* ont des mœurs différant autant que leurs formes.

Les espèces à yeux relativement bien développés et à longues pattes, parmi lesquelles les formes pourvues de soldats à mandibules en hameçon, sont des chasseresses infatigables. Elles s'avancent à découvert par longues colonnes, apportant la terreur dans le monde des insectes et des petits animaux. Il faut distinguer les expéditions de chasse des émigrations; comme a observé Belt, au moins une partie de la fourmilière change souvent de résidence; elle déménage en large colonne emportant larves et nymphes et va établir un nid provisoire dans un abri quelconque; les fourmis sont accrochées dans ce nid comme un essaim d'abeilles, par leurs longues pattes armées d'ongles dentés, et les larves et les nymphes sont suspendues au milieu des fourmis. De ce repaire partent des colonnes de chasse. Les soldats à mandibules en crochet sont relativement en petit nombre, épars sur les flancs de la colonne en marche. Leur rôle est problématique; jamais ils ne portent de larves ni de proie.

L'*Eciton praedator*, quoiqu'il soit à peu près privé d'yeux, chasse à découvert, il s'abrite toutefois volontiers sous les feuilles; il ne forme pas de colonnes, mais une horde serrée. Cet *Eciton* est omnivore; lorsqu'il est entré dans une maison, non seulement il donne la chasse aux petits animaux, mais il s'attaque aux provisions de bouche et il est surtout friand de sucre. La fourmilière est dans la terre à une profondeur considérable.

L'*Eciton coecum* et la plupart des espèces aveugles ou presque aveugles mènent une vie exclusivement souterraine et font des expéditions cachées comme les *Dorylus*.

Les *Eciton* mâles viennent le soir à la lumière comme les *Dorylus*. Il est très rare que ceux-ci soient capturés dans la fourmilière; quant aux femelles, il y a peu de temps qu'elles ont été découvertes pour quelques espèces.

Je ne puis mieux terminer cette courte notice éthologique qu'en rapportant une observation de mon collègue Forel sur l'*Eciton carolinense* : « Les *Eciton* portent leurs larves et leurs nymphes, qui sont très allongées, en se mettant à cheval dessus avec leurs six pattes, comme les *Polyergus*, mais d'une façon encore plus accentuée. Même de petites ouvrières portent ainsi de grandes nymphes, ne touchant le sol qu'avec le bout des leurs tarses. Mais ainsi elles cheminent très vite et ont les antennes libres. En second lieu, leur faculté instinctive de se concerter et de former des files dépasse absolument tout ce que j'ai vu chez d'autres fourmis. Vous jetez une poignée d'*Eciton* avec leurs larves sur un terrain absolument étranger. En pareille circonstance, où les autres fourmis s'éparpillent en désordre et ont besoin d'une heure ou plus pour arriver à l'ordre, à réunir leurs nymphes et surtout à reconnaître les environs, les *Eciton* se concertent, sans perdre une minute. En cinq minutes, ils ont formé des files distinctes d'ouvrières qui ne s'écartent pas les unes des autres, portent en partie les larves et les nymphes, et marchent en ligne assez précise, tâtant le terrain de leurs antennes, explorant tous les trous et fentes jusqu'à ce qu'elles trouvent une cavité à leur convenance. Alors le déménagement s'exécute avec un

ordre et une rapidité étonnants... Le fait est remarquable chez une fourmi aveugle, qui n'a absolument que ses antennes pour se diriger » (1).

Type du genre : *Eciton hamatum,* Fabricius.

Distribution géographique. — Depuis les états du sud des Etats-Unis de l'Amérique du Nord jusqu'au bassin du Rio de la Plata; n'est pas représenté aux Grandes Antilles ni au Chili (2).

TABLE DES SOUS-GENRES

A. Ouvrière, soldat et femelle. — *Ongles avec une dent bien marquée au milieu.*

Mâle. — *Pattes longues, le fémur postérieur n'atteignant ou dépassant le bord postérieur du deuxième segment du gastre; tête large, corselet médiocrement voûté.*

Ouvrière. — *Premier article du funicule au moins deux fois plus court que le deuxième; tête pourvue de chaque côté à l'angle occipital d'une épine plus ou moins recourbée; des yeux bien distincts.* — Soldat *ayant des mandibules en hameçon* (E. rapax *n'a pas de soldat*) . . . . . 1. Subgenus Eciton, Latreille (s. str.).

Ouvrière. — *Premier article du funicule pas deux fois plus court que le deuxième; tête dépourvue d'épines ou ayant tout au plus une épine simple à l'angle occipital* . . . . . 2. Subgenus Labidus, Jurine (s. str.).

A'. Ouvrière et femelle. — *Ongles simples.*

Mâle. — *Pattes courtes, le fémur postérieur n'atteignant pas le bord postérieur du deuxième segment du gastre; tête étroite, corselet bossu, surplombant la tête* . . . . . 3. Subgenus Acamatus, Emery.

1. Subgenus ECITON, Latreille (s. str.)

Eciton. Latreille, Hist. Nat. Crust. Ins. Vol. 4, p. 130 (1802).
Labidus (part.). Shuckard, Ann. Nat. Hist. Vol. 5, p. 196 (1840).
Ancylognathus. Lund, Ann. Sc. Nat. Zool. Vol. 23, p. 121 (1831).
Camptognatha. Westwood, in Griffith, Anim. Kingdom, Vol. 15 (5), p. 16 (1832).
Mayromyrmex. Ashmead, The Canad. Entom. p. 381 (1905); Proc. Ent. Soc. Wash. Vol. 8, p. 24 (1906).

Caractères. — *Ouvrière.* — Tête arrondie en arrière; les deux angles latéraux postérieurs prolongés en une épine plus ou moins recourbée, excepté chez les tout petits individus.

Arêtes frontales ayant entre les antennes une dilatation dentiforme.

Yeux petits, mais bien distincts, à cornée bombée.

Antennes relativement grêles, du moins chez les exemplaires au-des-

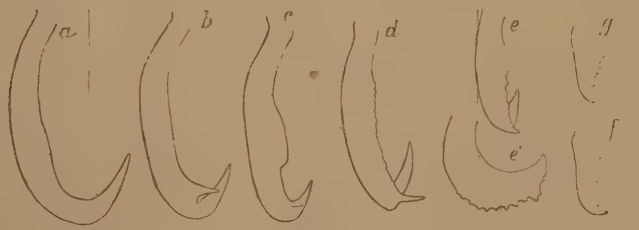

Fig. 5

(1) Forel, *Ann. Soc. Ent. Belg.* Vol. 43, p. 444 (1899).
Voyez encore pour l'éthologie des *Eciton*: Bates, *The Naturalist on the River Amazons*, Lond. (1863); Belt, *The Naturalist in Nicaragua*, Lond. (1874); W. Müller, « Beobachtungen an Wanderameisen », *Kosmos*, Vol. 18, p. 81-93 (1886); Forel, *Biol. Centr. Amer.* Hym. Vol. 3, Formicidæ (1899-1900); Wheeler, « The Female of Eciton », etc., *Amer. Natur.* Vol. 34, No. 403, p. 563-574 (1900); « The Mâle of some Texan Ecitons », *ibidem*, Vol. 35, No. 411, p. 157-173 (1901).

(2) Voyez pour la détermination des espèces les tables analytiques : Mayr, *Wien. Ent. Zeit.* Vol. 5, p. 115-122 (1886), ♀ ☿; Emery, *Bull. Soc. Ent. Ital.* Vol. 26, p. 183, 184 (1894), *Acamatus*, ♀; *Mem. Accad. Sc. Bologna* (5), Vol. 8, p. 514-516 (1900), ♂.

sus de la moyenne; premier article du funicule au moins deux fois plus court que le suivant, sauf chez les très petits individus.

Epinotum plus ou moins armé.

Ongles dentés dans le milieu de leur longueur.

Soldat. — Caractères comme chez l'ouvrière. La tête est plus grosse, avec des épines plus grandes et plus recourbées, armée de mandibules en crochet; il existe tous les passages entre les mandibules triangulaires de l'ouvrière et celles énormes et crochues du soldat.

Femelle inconnue.

Mâle. — Taille grande : 15 à 20 millimètres.

Tête atteignant à peu près la largeur du corselet. Celui-ci médiocrement voûté, mais pas excessivement comme dans le sous-genre *Acamatus*, la tête étant toujours découverte.

Pattes longues et robustes, le fémur postérieur dépassant le bord postérieur du deuxième segment du gastre.

Pétiole avec les angles postérieurs fortement saillants, creusé à sa face supérieure.

Type du sous-genre : *Eciton hamatum*, Fabricius.

Distribution géographique des espèces. — Ne dépassent pas de beaucoup la zône tropicale; *Eciton quadriglume*, Haliday, va jusqu'au 30o degré de latitude Sud.

1. *E. angustatum*, Roger, Berl. Ent. Zeitschr. Vol. 7, p. 204 (1863), ♀. — Yucatan.

2. *E. burchelli* (Westwood), Arcana, Ent. Vol. 1, p. 74, pl. 20, f. 1 (1842), ♂ (*Labidus burchellii*). — Mexique, Amérique centr. et méridionale, jusqu'au Paraguay, et à Sta-Catharina du Brésil; manque à Rio Grande do Sul; Uruguay (Mayr).

   Labidus burchellii, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 1, f. 3, pl. 2, f. 11 (1859).

   E. burchelli, Emery, Bull. Soc. Ent. Ital. Vol. 28, p. 39, pl. 1, f. 2 (1896), ☿ ♀ ♂; Forel, Biol. Centr. Amer. Vol. 3, p. 23 (1899).

   E. hamata (part.), Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 161 (1855); Cat. Hym. Brit. Mus. Vol. 6, p. 148 (1858) (1).

   E. hamatum, W. Müller, Kosmos, Vol. 18, p. 81-93 (1886), ♀ ☿ ♂.

   E. rapax (part.), Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 163 (1855); Mayr, Reise Novara, Formic. p. 77 (1865); Norton, Trans. Amer. Ent. Soc. Vol. 2, p. 45 (1868).

   E. mexicana, Norton, Amer. Natur. Vol. 2, p. 62, pl. 1, f. 5, 6; Proc. Essex Instit. Vol. 6, Comm. p. 7, fig. (1868), ♀ ☿, nec Roger.

   E. foreli, Mayr, Wien. Ent. Zeit. Vol. 5, p. 116, 122 (1866), ♀ ☿; Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 177, pl. 2, f. 3 (1894).

   var. infumata, Wheeler, Bull. Lab. Zool. Portici, Vol. 3, p. 231 (1909), ♀ ☿. — Mexique.

   var. parvispina, Forel, Biol. Centr. Amer. Vol. 3, p. 23 (1899), ♀. — Guatemala.

   subsp. urichi, Forel, ibidem, p. 24 (1899), ♀. — Trinidad.

3. *E. dubitatum*, Emery, Bull. Soc. Ent. Ital. Vol. 28, p. 40, pl. 1, f. 4 (1896), ♂. — Paraguay.

   ? *E. rogeri*, Dalla Torre, ♂.

4. *E. hamatum* (Fabricius), Spec. Ins. Vol. 1, p. 494 (1781), ☿ (*Formica hamata*). — Mexique, Amérique centrale, Colombie, région de l'Amazone.

   E. hamata, Latreille, Fourmis, p. 242, pl. 8, f. 54 (1802).

   Myrmecia hamata, Fabricius, Syst. Piez. p. 425 (1804).

   E. hamata, Latreille, Hist. Nat. Crust. Ins. Vol. 13, p. 258 (1805); Fred. Smith (part.), Trans. Ent. Soc. Lond. (2), Vol. 3, p. 161, pl. 13, f. 6 (1855); Cat. Hym. Brit. Mus. Vol. 6, p. 148 (1858); Belt, Natur. in Nicaragua, p. 17-29 (1874).

   E. hamatum, Mayr, Wien. Ent. Zeit. Vol. 5, p. 117, 121 (1886); Emery,

(1) Je laisse subsister cette synonymie de Fred. Smith sur la foi de Mayr (1886).

Bull. Soc. Ent. Ital. Vol. 26, p. 176, pl. 2, f. 2 (1894); Forel, Biol. Centr. Amer. Vol. 3, p. 22 (1899).

? *E. hamatum*, Emery, Bull. Soc. Ent. Ital. Vol. 28, p. 39, pl. 1, f. 3 (1896), ♂.

Camptognatha hamata, Westwood, in Griffith, Anim. Kingdom, Vol. 15 (5), p. 16, pl. 76, f. 4 (1832).

Formica curvidentata, Latreille, Fourmis, p. 269, pl. 8, f. 55 (1802).

E. curvidentatum, Lepeletier, Hist. Nat. Ins. Hym. Vol. 1, p. 179 (1838); Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 162 (1855).

E. drepanophorum, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 6, p. 149 (1858); Bates, Natur. Amazon. Vol. 2, p. 358 (1863).

5. *E. lucanoides*, Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 176, pl. 2, f. 1 (1894), ☿. — Pérou.

6. *E. quadriglume* (Haliday), Trans. Linn. Soc. Lond. Vol. 17, p. 328 (1836) (*Atta quadriglumis*). — Brésil : de Bahia à Rio Grande do Sul.

E. quadriglume, Mayr, Wien. Ent. Zeit. Vol. 5, p. 118, 122 (1886), ♀ ☿; Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 177, pl. 2, f. 4 (1894); ibidem, Vol. 28, p. 31, pl. 1, f. 1 (1896), ♂.

Labidus latreillii, Lepeletier, Hist. Nat. Ins. Hym. Vol. 1, p. 229 (1838), ♂ (nec Jurine).

L. fargeaui, Shuckard, Ann. Mag. Nat. Hist. Vol. 5, p. 198 (1840), ♂ (*L. fargeavii*); Westwood, Arc. Ent. Vol. 1, p. 74 (1842).

Mayromyrmex fargeaui, Ashmead, The Canad. Entom. p. 381 (1905); Proc. Ent. Soc. Wash. Vol. 8, p. 24 (1906).

E. lugubris, Roger, Berl. Ent. Zeitschr. Vol. 7, p. 203 (1863), ♀; Mayr, Novara Reise, Formic. p. 77 (1865); Forel, Mitt. Schweiz. Ent. Ges. Vol 7, p. 217 (1886), ☿ (1).

7. *E. rapax* (part.), Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 163 (1855), ♀ major; Cat. Hym. Brit. Mus. Vol. 6, p. 151 (1858). — Région de l'Amazone.

E. rapax, Mayr, Wien. Ent. Zeit. Vol. 5, p. 118 (1886), ♀; Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 179 pl. 2, f. 7 (1894).

8. *E. rogeri*, Dalla Torre, Wien, Ent. Zeit. Vol. 11, p. 89 (1892). — Mexique, Amérique centrale, Paraguay.

E. rogeri, Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 178, pl. 2, f. 6 (1894), ♀ ☿; Forel, Biol. Centr. Amer. Vol. 3, p. 25 (1899).

E. mexicana, Roger, Berl. Ent Zeitschr. Vol. 7, p. 205 (1863), ♀, nec Fred. Smith; Mayr, Wien. Ent. Zeit. Vol. 5, p. 117 (1886).

9. *E. vagans* (Olivier), Encycl. Méth. Ins. Vol. 6, p. 501 (1791), ♀ (*Formica vagans*). — Mexique, Amérique centrale, Brésil jusqu'à Matto-Grosso.

E. vagans, Latreille, Fourmis, p. 243 (1802).

Atta vagans, Illiger, Mag. Insektenk. Vol. 6, p. 194 (1807).

E. vagans, Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 162 (1855), ♀ ☿; Cat. Hym. Brit. Mus. Vol. 6, p. 151 (1858); Mayr, Wien. Ent. Zeit. Vol. 5, p. 118, 122 (1886); Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 178, pl. 2, f. 5 (1894); Forel, Biol. Centr. Amer. Vol. 3, p. 24 (1899).

E. simillima, Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 164 (1855).

E. brunnea, Norton, Amer. Natur. Vol. 2, p. 62 (1868); Proc. Essex Instit. Vol. 6, Comm. p. 6 (1868) (2).

2. Subgenus LABIDUS, Jurine (s. str.)

Labidus. Jurine, Nouv. Méth. Class. Hym. p. 282 (1807).

Eciton (part.). Fred. Smith. Trans. Ent. Soc. Lond. (2), Vol. 3, p. 160 (1855).

Nycteresia. Roger, Berl. Ent. Zeitschr. Vol. 5, p. 21 (1861).

Pseudodichthadia. Ern. André, Spec. Hym. Eur. Vol. 2, suppl. p. 6 (1885).

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(1) *Ancylognathus lugubris*, Lund, *Ann. Sc. Nat. Zool.* Vol. 23, p. 131 (1832), est un *Eciton* à mandibules en crochet; mais il n'a été décrit nulle part.

(2) La description de Norton se rapporte en tous points à l'*E. vagans* et pas à l'*E. burchelli*, comme le supposait Mayr (1886).

Caractères. — *Ouvrière.* — Tête de forme variable, avec les angles postérieurs arrondis ou saillants, exceptionnellement avec une épine courte et droite.

Arêtes frontales ayant entre les antennes une dilatation dentiforme.

Yeux petits ou rudimentaires.

Antennes relativement courtes; premier article du funicule moins de deux fois plus court que le suivant.

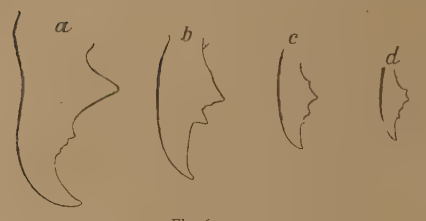


Fig 6.

Ongles dentés dans le milieu de leur longueur.

Soldat plus ou moins differencié; mandibules jamais en crochet.

Femelle. — Ongles dentés.

Pétiole squamiforme, échancré au milieu de son bord supérieur, avec les angles saillants.

Mâle. — Caractères du sous-genre *Eciton.*

Dans plusieurs espèces le pétiole n'est pas fortement creusé à sa face supérieure et a les angles postérieurs faiblement saillants.

Type du sous-genre : *Labidus latreillei,* Jurine = *Eciton coecum* (Latreille).

Distribution géographique des espèces. — La même que dans le sous-genre *Eciton;* seul l'*Eciton coecum* dépasse ces limites; il se trouve depuis le Texas jusqu'au bassin du Rio de la Plata.

10. *E. coecum* (Latreille), Fourmis. p. 270, pl. 9, f. 56 1802), ♀ (*Formica coeca*). — Depuis le Texas jusqu'au bassin du Rio de la Plata.

Nycteresia coeca, Roger, Berl. Ent. Zeitschr. Vol. 5, p. 22 (1861).

E. coecum, Mayr, Wien. Ent. Zeit. Vol. 5, p. 119 (1886), ♀; Verh. Zool.-bot. Ges. Wien. Vol. 37, p. 553 (1887), ☿; Ern. André, in Forel, Biol. Centr. Amer. Vol. 3, p. 160 (1900), ♀; Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 517 (1900), ♀ ♂; Wheeler, Amer. Natur. Vol. 35, p. 158 (1901); Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 408, pl. 26, f. 3 (1908).

Formica omnivora, Olivier, Encycl. Méth. Ins. Vol. 6, p. 496 (1791), exclus. syn. (nec Linné).

E. omnivorum, Emery, Bull. Soc. Ent. Ital. Vol. 23, p. 163 (1891) ♀; ibidem, Vol. 26, p. 179, pl. 2, f. 9 (1894), ♀ ☿ ♂; Dalla Torre, Cat. Hym. Vol. 7, p. 5 (1893).

Labidus latreillii, Jurine, Nouv. Méth. Class. Hym. p. 283 (1807), ♂; Shuckard, Ann. Nat. Hist, Vol. 5, p. 199 (1840); Westwood, Arc. Ent. Vol. 1, p. 75 (1842).

Mutilla (Labidus) fulvescens, Blanchard, Cuvier, Règne, Anim. Ins. (ed. 3), Vol. 2, pl. 118, f. 2 (1849).

Labidus sayi, Haldeman, Stanbury, Explor. Utah, p. 366 (1852), ♂.

L. atriceps, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 5, pl. 2, f. 4 (1859), ♂.

? *L. pilosus,* Fred. Smith, ibidem, p. 7 (1859), ♂.

E. vastator, Fred Smith. Journ. Ent. Vol. 1, p. 71 (1860), ♀.

E. erraticum, Fred. Smith, ibidem, (1860), ♀; Bates, Natur. Amazon. Vol. 2, p. 358 (1863).

Myrmica rubra, Buckley, Proc. Ent. Soc. Philad. p. 335 (1866).

Pseudodichthadia incerta, Ern. André, Spec. Hym. Eur. Vol. 2, Suppl. p. 8, fig. (1885), ☿.

? *E. smithii.* Dalla Torre, Wien. Ent. Zeit. Vol. 21, p. 89 (1892).

E. selysi, Forel, Ann. Soc. Ent. Belg. Vol. 48, p. 169 (1904), ♀.

var. biloba, Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 51 (1901), ♂. — Ecuador.

var. jurinei (Shuckard), Ann. Nat. Hist. Vol. 5, p. 198 (1840), ♂ (*Labidus jurinii*); Westwood, Arc. Ent. Vol. 1, p. 75 (1842); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 1 (1859). — Brésil.

var. servillei (Westwood), Arc. Ent. Vol. 1, p. 75 (1842), ♂ (*Labidus servillei*); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 10 (1859). — Amérique centr. et méridionale.

11. *E. crassicorne*, Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 163, pl. 13, f. 1, 2 (1855), ♀; Cat. Hym. Brit. Mus. Vol. 6, p. 151, pl. 6, f. 1-4 (1858) (*E. crassicornis*). — Mexique, Amérique centrale, Colombie, Brésil, Paraguay.
   E. crassicorne, Mayr, Novara Reise. Formic. p. 77 (1865), ♀; Wien. Ent. Zeit. Vol. 5, p. 115 (1885); Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 179, pl. 2, f. 8 (1894); Forel, Biol. Centr. Amer. Vol. 3, p. 25 (1899).

12. *E. curvipes*, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 515, 518, f. 1, 2 (1900) ♂. — Costa Rica.

13. *E. esenbecki* (Westwood), Arc. Ent. Vol. 1, p. 75, pl. 20, f. 4 (1842), ♂ (*Labidus esenbecki*). — Texas, Mexique, Amérique centrale et Méridionale, Brésil, Bolivie.
   E. esenbecki, Emery, Bull. Soc. Ent. Ital. Vol. 22, p. 39 (1890), ♂; Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 409, pl. 26, f. 1, 2 (1908).
   ? *E. crassicorne* (Fred. Smith), Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 410 (1908), ♂.

14. *E. hartigi* (Westwood), Arc. Ent. Vol. 1, p. 75, pl. 20, f. 3 (1842), ♂ (*Labidus hartigii*). — Brésil : Rio Janeiro jusqu'à Santa Catharina.

15. *E. nigrita*, Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 52, f. 6 (1901), ♂. — Mexique, Guatemala.
   E. coecum subsp. *kulowi*, Forel, Mitt. Mus. Hamburg, Vol. 18, p. 47 (1901), ♂.

16. *E. pittieri*, Forel, Biol. Centr. Amer. Vol. 3, p. 24, pl. 1, f. 15 (1899), ♀. — Costa Rica.

17. *E. praedator*, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 6, p. 152 (1858), ♀ — Mexique, Amérique centrale et méridionale, jusqu'à Rio Grande do Sul et au Paraguay.
   E. praedator, Mayr, Novara Reise, Formic. p. 77 (1865); Belt, Natural. in Nicaragua, p. 17 29 (1874); Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 160, pl. 2, f. 10 (1894), ♀; Forel, Biol. Centr. Amer. Vol. 3, p. 26 (1899); Ann. Soc. Ent. Belg. Vol. 50, p. 246 (1906), ♂.
   Formica omnivora, Kollar, in Pohl, Reise in Brasil. Vol. 1, p. 114, f. 11 (1832), ♀ (nec Olivier).
   E. omnivorum, Mayr, Wien. Ent. Zeit. Vol. 5, p. 118 (1886).
   E. tepeguas, Norton, Trans. Amer. Ent. Soc. Vol. 2, p. 46 (1868);
   E. westwoodi, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 515, 518, f. 3, 4 (1900), ♂.
   var. ferruginea, Norton, Trans. Amer. Ent. Soc. Vol. 2, p. 46 (1868). — Mexique.

18. *E. schlechtendali*, Mayr, Verh. Zool.-bot. Ges. Vol. 37, p. 552 (1887), ♀ — Brésil : Ypiranga.

19. *E. spininode*, Emery, Bull. Soc. Ent. Ital. Vol. 22, p. 38 (1890), ♀ — Costa Rica.

ESPÈCE DONT LE SOUS-GENRE EST DOUTEUX

20. *E. morosum* (Fred. Smith), Cat. Hym. Brit. Mus. Vol. 7, p. 6, pl. 2, f. 13 (1859), ♂ (*Labidus morosus*). — Mexique.
   E. morosum, Forel, Biol. Centr. Amer. Vol. 3, p. 37 (1899).
   Mayromyrmex morosus, Ashmead, The Canad. Entom. p. 381 (1905).
   var. payarum, Forel, Biol. Centr, Amer. Vol. 3, p. 37 (1899), ♂; Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 519, f. 5 (1900). — Honduras.
   subsp. ursina, Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 52 (1901), ♂. — Brésil.

3. Subgenus ACAMATUS, Emery

Acamatus. Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 181 (1894).

Eciton (part.). Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 160 (1855); Mayr, Wien. Ent. Zeit. Vol. 5, p. 33 (1886).

Labidus (part.). Shuckard, Ann. Nat. Hist. Vol. 5, p. 196 (1840).

Leptanilla. Holmgren, Zool. Anzeig. Vol. 33, p. 347 (1908), nec Emery.

Caractères. — *Ouvrière.* — Petites espèces la plupart aveugles. Dimensions très variables dans chaque espèce; les proportions de la tête varient aussi, néanmoins les mandibules conservent la même structure et il n'y a pas de différenciation de soldats proprement dits.

Arêtes frontales n'ayant pas de dilatation en forme de dent entre les antennes.

Epinotum inerme.

Ongles simples.

Femelle. — Ongles simples.

Pétiole nodiforme.

Mâle. — Taille ordinairement au-dessous de 15 millimètres.

Tête relativement petite, le mésonotum très voûté, bossu, surplombe la tête.

Pattes courtes et faibles; le fémur postérieur n'atteint pas le bord postérieur du deuxième segment du gastre, quand celui-ci est porté en arrière.

La lame subgénitale a ordinairement une profonde et large fente médiane; au fond de la fente s'élèvent parfois des pointes accessoires.

Distribution géographique des espèces. — La même qui a été décrite en parlant du genre dans son ensemble.

ESPÈCES DONT L'OUVRIÈRE EST CONNUE

21. *E. alfaroi*, Emery, Bull. Soc. Ent. Ital. Vol. 22, p. 39 (1890), ♀. — Costa Rica.

22. *E. angustinode*, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 26, p. 691 (1888). ♀. — Brésil : Rio Grande do Sul; Paraguay.
E. hetschkoi, Emery, Bull. Soc. Ent. Ital. Vol. 19, p. 353 (1887) (nec Mayr).

23. *E. antillarum*, Forel, Trans. Ent. Soc. Lond. p. 299 (1897), ♀. — Ile Grenada.
? *E. klugi* (Shuckard), Forel, Trans. Ent. Soc. Lond. p. 299 (1897).

24. *E. balzani*, Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 182 (1894), ♀. — Bolivie.

25. *E. bohlsi*, Emery, Zool. Jahrb. Syst. Vol. 9, p. 626 (1896), ♀. — Paraguay.

26. *E. californicum*, Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 20, p. 969 (1870), ♀; Wien. Ent. Zeit. Vol. 5, p. 121 (1886). — Californie : S. Francisco.
E. californicum, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 523 (1900).

27. *E. carolinense*, Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 184 (1894), ♀; Zool. Jahrb. Syst. Vol. 8, p. 259 (1895). — Caroline du Nord.
E. carolinense, Forel, Ann. Soc. Ent. Belg. Vol. 43, p. 443, 447 (1899), ♀.

28. *E. commutatum*, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 522 (1900). ♀. — Texas, Californie, Nouvelle-Grenade, Bolivie.
E. commutatum, Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 413 (1908)
E. nitens, Mayr, Sitzungsb. Akad. Wien. Vol. 61, p. 398 (1870); Pergande, Proc. Calif. Acad. (2), Vol. 5, p. 874 (1895).
E. nitens (part.), Mayr, Wien. Ent. Zeit. Vol. 5, p. 121 (1886).

29. *E. cristatum*, Ern. André, Rev. Ent. Vol. 8, p. 223 (1889), ♀. — Amérique méridonale.

30. *E. fiebrigi*, Forel, Deutsche Ent. Zeitschr. p. 225 (1909), ♀ (*Acamatus*). — Paraguay.

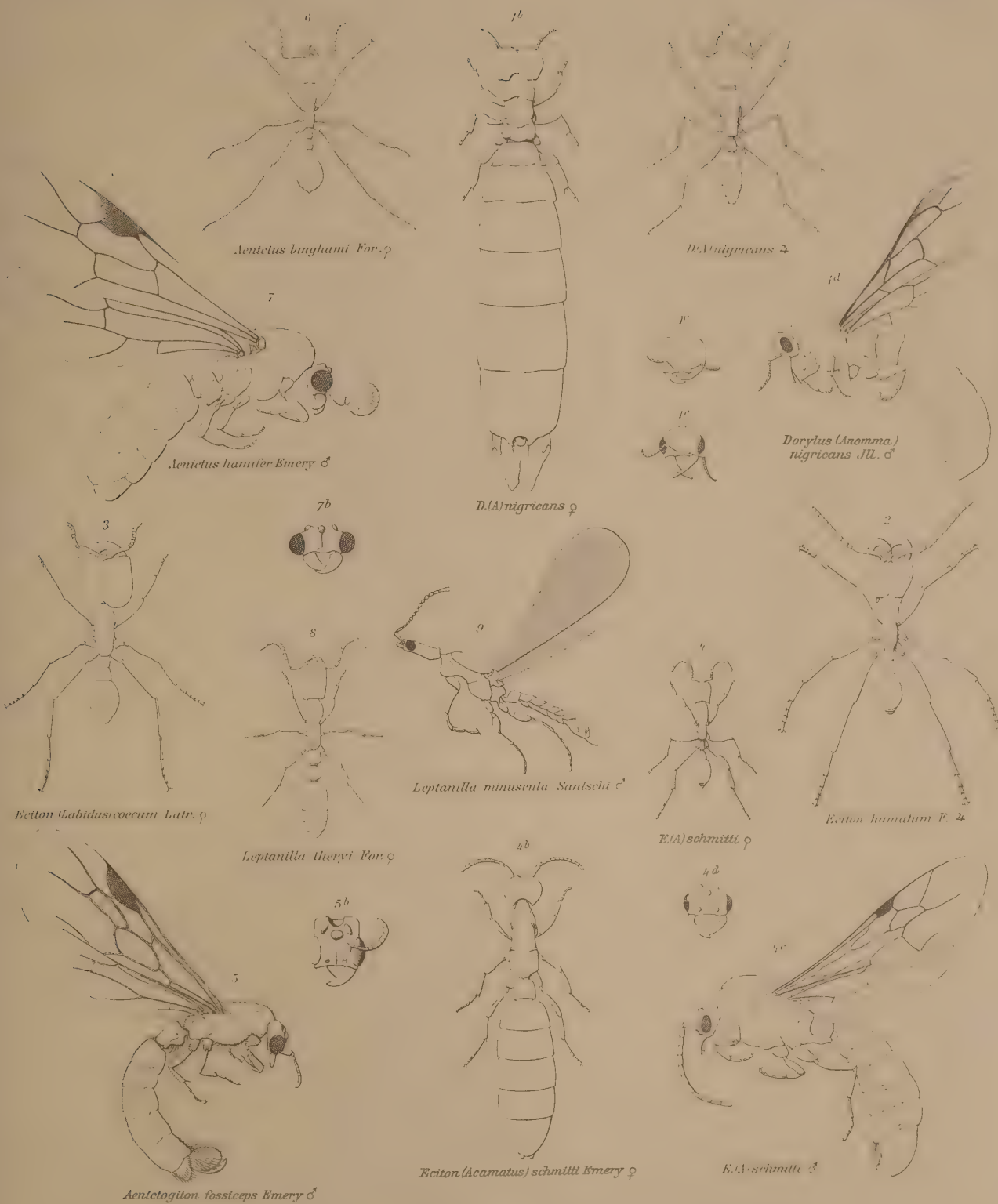
31. *E. goeldii*. Forel, Rev. Suisse Zool. Vol. 9. p. 352 (1901), ♀ (*Acamatus*). — Brésil : Bahia.

32. *E. hetschkoi*, Mayr, Wien. Ent. Zeit. Vol. 5, p. 33, 120 (1886), ♀♂. — Brésil : Paraná.

33. *E. legionis*, Fred. Smith, Trans. Ent. Soc. Lond. (2), Vol. 3, p. 164 (1885), ♀. — Brésil : depuis Pará à Rio Grande do Sul.
E. legionis, Bates, Natur. Amazon. Vol. 1, p. 358 (1863); Mayr, Wien. Ent. Zeit. Vol. 5. p. 120 (1886); Emery, Mem. Accad Sc. Bologna (5), Vol. 8, p. 521 (1900), ♂.

34. *E. melanocephalum*, Emery, Zool. Jahrb. Syst. Vol, 8, p. 260, nota, ♀ (1895). — Mexique.

35. *E. nitens*, Annuar. Soc. Natur. Modena, Vol. 3, p. 168 (1868), ♀. — République Argentine, Uruguay.
E. nitens, Emery, Mem. Acad. Sc. Bologna (5), Vol. 8, p. 522 (1900).
E. nitens (part.), Mayr, Wien. Ent. Zeit. Vol. 5, p. 121 (1886).



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36. *E. nordenskioeldi* (Holmgren), Zool. Anzeig. Vol. 33, d. 347 (1908), ♀. (*Leptanilla nordenskiöldi*). — Pérou.

37. *E. opacithorax*, Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 184 (1894), ♀. (*E. californicum* subsp. *opacithorax*); Zool. Jahrb. Syst. Vol. 8, p. 259 (1895). — Caroline du Nord, Missouri, Texas, Californie.
   E. opacithorax, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 523 (1900), ♀; Wheeler & Long, Amer. Natur. Vol. 35, p. 163, 173, f. 2, 3 (1901), ♀ ♂; Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24 p. 411, pl. 26, f. 4 (1908).

38. *E. pauxillum*, Wheeler, Psyche, Vol. 10, p. 93, f. 1 (1903) ♀, (*Acamatus*). — Texas.

39. *E. pilosum*, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 6, p. 151 (1858), ♀ (*E. pilosa*). — Mexique, Amérique centrale et méridionale, Brésil, Paraguay.
   E. pilosum, Mayr, Novara Reise, Formic. p. 77 (1865); Wien. Ent. Zeit. Vol. 5, p. 120 (1886).
   E. clavicornis, Norton, Trans. Amer. Ent. Soc. Vol. 2, p. 46 (1868).
   var. angustior, Forel, Deutsche Ent. Zeitschr. p. 256 (1909), ♀. — Paraguay.

40. *E. planidorsum*, Emery, Bull. Soc. Ent. Ital. Vol. 37, p. 110 (1995), ♀. — Paraguay.

41. *E. pseudops*, Forel, Deutsche Ent. Zeitschr. p. 254 (1909). ♀. — Paraguay.

42. *E. punctaticeps*, Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 181 (1894), ♀. — Brésil, Rio Janeiro.

43. *E. schmitti*, Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 183 (1894), ♀; Zool. Jahrb. Syst. Vol. 8, p. 258 (1895). — Texas, New Mexico, Colorado, N. Carolina.
   E. schmitti, Wheeler & Long, Amer. Natur. Vol. 35, p. 161 (1901), ♂; Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 410 pl. 26, f. 13 (1908).
   E. sumichrasti (part.), Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 36, p. 440, (1887) (nec Norton).
   E. sumichrasti, Wheeler, Amer. Natur. Vol. 34, p. 464, fig. (1900) ♀ ♀.

44. *E. silvestrii*, Emery, Bull. Soc. Ent. Ital. Vol. 37, p. 109 (1905), ♀. — République Argentine.

45. *E. spegazzinii*, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 26, p. 691 ♀, (1888). — République Argentine.

46. *E. sumichrasti*, Norton, Amer. Natur. Vol. 2, p. 62, pl. 1, f. 7 (1868), ♀; Proc. Essex Instit. Vol. 6, p. 6, fig. (1868). — Mexique, Amérique centrale.
   E. sumichrasti, Emery, Bull. Soc. Ent. Ital. Vol. 26, p. 183 (1894).
   E. sumichrasti (part.), Mayr, Wien. Ent. Zeit. Vol. 5, p. 120 (1886).

47. *E. wheeleri*, Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 55 (1901), ♀. — Texas.
   E. wheeleri, Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 412 (1908).

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48. *E. andréi*, Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 53, f. 6 (1901). — Mexique.

49. *E. amplipenne* (Fred. Smith), Cat. Hym. Brit. Mus. Vol. 7, p. 6, pl. 2, f. 14 (1859) (*Labidus amplipennis*). — Colombie.
   E. amplipenne, Forel, Mitt. Mus. Hamburg, Vol. 18, p. 48 (1901).

50. *E. arizonensis*, Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 414, pl. 26, f. 5 (1908) (*Acamatus*). — Texas.

51. *E. d'orbignyi* (Shuckard), Ann. Nat. Hist. Vol. 5, p. 259 (1840) (*Labidus d'orbignii*). — Bolivie.
   Labidus d'orbignii, Westwood, Arc. Ent. Vol 1, p. 77 (1842).
   E. d'orbignyi, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 515, f. 11 (1900).

52. *E. erichsoni* (Westwood), Arc. Ent. Vol. 1, p. 77 (1842) (*Labidus erichsonii*). — Brésil : Rio Vendinha.
   E. erichsoni, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 517 (1900).

53. *E. falciferum*, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 520, f. 17 (1900). — Bolivie.

54. *E. fonscolombei* (Westwood), Arc. Ent. Vol. 1, p. 77 (1842) (*Labidus fonscolombii*). — Brésil, Paraguay.
   E. fonscolombei, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 516, f. 21 (1900).

55. *E. gravenhorsti* (Westwood), Arc. Ent. Vol. 1, p. 76 (1842) (*Labidus gravenhorstii*). — Mexique, Guatemala, Brésil.
E. gravenhorsti, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 516 (1900).

56. *E. guerini* (Shuckard) Ann. Mag. Nat. Hist. Vol. 5, p. 397 (1840) (*Labidus guerinii*). — Brésil : Minas Geraes.
Labidus guerinii, Westwood, Arc. Ent. Vol. 1, p. 77 (1842); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 9 (1859).
E. guerini, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 516, f. 7, 8 (1900).

57. *E. halidayi* (Shuckard), Ann. Nat. Hist. Vol. 5, p. 200 (1840) (*Labidus halidaii*). — Mexique, Amérique centrale, Pérou, Brésil : San Paulo.
Labidus halidaii, Westwood, Arc. Ent. Vol. 1, p. 76 (1842); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 12 (1859).
E. halidayi, Forel, Biol. Centr. Amer. Vol. 3, p. 28 (1899); Emery, Mem. Accad. Sc. Bologna (5), p. 516 (1900).
Labidus latreillii, Haliday, Trans. Linn. Soc. Lond. Vol. 17, p. 328 (1836). nec Jurine.

58 *E. harrisi* (Haldeman), Stanbury : Expl. Utah, p. 367 (1852) (*Labidus harrisii*). — Utah, Texas, New Mexico, Arizona, Mexique.
E. harrisi, Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 36, p. 36 (1886); Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 515, f. 18 (1900); Wheeler & Long, Amer. Natur. Vol. 35, p. 165, f. 2*a* (1901); Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 413, pl. 26, f. 10 (1908).

59. *E. hopei* (Shuckard), Ann. Nat. Hist. Vol. 5, p. 258 (1840) (*Labidus hopei*). — Brésil : Bahia.
Labidus hopei, Westwood, Arc. Ent. Vol. 1, p. 76 (1842); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 5 (1859).
E. hopei, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 515, f. 20 (1900).

60. *E. illigeri* (Shuckard), Ann. Nat. Hist. Vol. 5, p. 397 (1840) (*Labidus illigeri*). — Brésil : Minas Geraes.
Labidus illigeri, Westwood, Arc. Ent. Vol. 1, p. 76 (1842); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 3 (1859).

61. *E. jevrmanni*, Forel. Mitt. Mus. Hamburg, Vol. 18, p. 48 (1901). — Brésil, Paraguay.

62. *E. jheringi*, Forel, Verh. Zool.-bot. Ges. Wien, Vol. 58, p. 347 (1908). — Rio Grande do Sul.

63. *E. klugi* (Shuckard), Ann. Nat. Hist. Vol. 5, p. 260 (1840) (*Labidus klugii*). — Iles S. Vincente et Grenada.
Labidus klugii, Westwood, Arc. Ent. Vol. 1, p. 77 (1842); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 6 (1859).
E. klugi, Forel, Trans. Ent. Soc. Lond. p. 298 (1897); Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 519, f. 6 (1900).
? *E. antillarum*, Forel, Trans. Ent. Soc Lond. p. 298 (1897), ♀.
var. imbellis, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 519 (1900). — Pérou.

64. *E. latiscapum*, Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 54, f. 7 (1901). — Rio Janeiro.
subsp. hospes, Emery, ibidem, Vol. 37, p. 111 (1905). — Misiones.

65. *E. leptognathum*, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 520, f. 15 (1900). — Bolivie.
var. physognatha, Emery, ibidem, p. 520, f. 16 (1900). — Bolivie.

66. *E. maxillosum*, Emery, ibidem, p. 519, f. 13, 14 (1900). — Amazonas.

67. *E. melshaemeri* (Haldeman), Stanbury, Expl. Utah, p. 368 (1852) (*Labidus melshaemeri*). — Utah, Texas, Mexique, Amérique centrale.
E. melshaemeri, Mayr, Verh. Zool.-bot. Ges. Wien. Vol. 36, p. 442 (1886); Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 418, pl. 26, f. 9 (1908).
subsp. desartsi, Forel, Mitt. Mus. Hamburg, Vol. 24, p. 2 (1907). — Paraguay.

68. *E. mexicanum* (Fred. Smith), Cat. Hym. Brit. Mus. Vol. 7, p. 7 (1859). (*Labidus mexicanus*). — Texas, Arizona, Mexique.
E. mexicanum, Emery. Zool. Jahrb. Syst. Vol. 8, p. 260 (1895); Mem. Accad. Sc. Bologna (5), Vol. 8, p. 515, f. 19 (1900); Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 414, pl. 26, f. 11 (1908).
E. subsulcatum, Mayr, Verh. Zool.-bot. Ges. Wien. Vol. 36, p. 440 (1886).
var. azteca, Forel, Mitt. Mus. Hamburg, Vol. 18, p. 49 (1901) (*E. aztecum*). — Guatemala, Costa Rica.

69. *E. minus* (Cresson), Trans. Amer. Ent. Soc. Vol. 4, p. 195 (1872) (*Labidus minor*). — Texas, Californie, Mexique.
E. minor, Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 36, p. 441 (1886).
E. minus, Emery, Zool. Jahrb. Syst. Vol. 8, p. 261 (1895); Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 418, pl. 26, f. 6 (1908).

70. *E. nigrescens* (Cresson), Trans. Amer. Ent. Soc. Vol. 4, p. 194 (1872) (*Labidus nigrescens*). — Texas, Kansas.
E. nigrescens, Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 417, pl. 26, f. 7 (1908).

71. *E. oslari*, Wheeler, Vol. 24, p. 415, pl. 26, f. 8 (1908) (*Acamatus*). — Arizona.

72. *E. panzeri* (Fred. Smith), Cat. Hym. Brit. Mus. Vol. 7, p. 72, pl. 2, f. 2 (1859) (*Labidus panzeri*). — Patria (?).

73. *E. pertyi* (Shuckard), Ann. Nat. Hist. Vol. 5, p. 262 (1840) (*Labidus pertii*). — Sud du Brésil.
Labidus pertii, Westwood, Arc. Ent. Vol. 1, p. 78 (1842).
L. latreillii, Perty, Delect. Anim. Artic. Brasil, p. 138, pl. 27, f. 11 (1833) (nec Jurine).

74. *E. radoszkowskii*, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 519, f. 9, 10 (1900). — Pérou.

75. *E. romandi* (Shuckard), Ann. Nat. Hist. Vol. 5, p. 261 (1840) (*Labidus romandii*). — Brésil : Pernambuco; Paraguay.
Labidus romandii, Westwood, Arc. Ent. Vol. 1, p. 78 (1842); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 7 (1859).
E. romandi, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 516, f. 23 (1900).

76. *E. shuckardi*, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 521 (1900). — Paraguay.

77. *E. spinolae* (Westwood), Arc. Ent. Vol. 1, p. 77 (1842) (*Labidus spinolae*). — Brésil : Minas Geraes, Santa Catharina; Bolivie.
E. spinolae, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 516 (1900).

78. *E. spoliator*, Forel, Biol. Centr. Amer. Vol. 3, p. 29 (1899). — Costa Rica, Texas.
E. spoliator, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 516, f. 24 (1900); Wheeler, Bull. Amer. Mus. Nat. Hist. Vol. 24, p. 416, pl. 26, f. 12 (1908).
subsp. tristis, Forel, Mitt. Naturh. Mus. Hamburg, Vol. 18, p. 48 (1901). — Mexique.

79. *E. strobeli* (Mayr), Annuar. Soc. Natur. Modena, Vol. 3, p. 166 (1868) (*Labidus strobeli*). — Bassin du Rio de La Plata.
E. strobeli, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 515, f. 12 (1900).

80. *E. sulcatum* (Mayr), Annuar. Soc. Natur. Modena, Vol. 3, p. 168 (1868) (*Labidus sulcatus*). — République Argentine.
E. sulcatum, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, 516, 521 (1900).

81. *E. swainsoni* (Shuckard), Ann. Nat. Hist. Vol. 5, p. 201 (1842) (*Labidus swainsonii*). — Brésil, Paraguay.
Labidus swainsonii, Westwood, Arc. Ent. Vol. 1, p. 76 (1842); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 8 (1859).
E. swainsoni, Emery, Mem. Accad. Sc. Bologna (5), Vol. 8, p. 516, f. 22 (1900).

82. *E. walkeri*, Westwood, Arc. Ent. Vol. 1, p. 77 (1842) (*Labidus walkerii*). — Région de l'Amazone, depuis Parájusqu'en Bolivie.

3. Genus ÆNICTOGITON, Emery

Ænictogiton. Emery, Bull. Soc. Ent. Ital. Vol. 33. p. 49 (1901).

Caractères. — *Mâle.* — Epistome extrêmement court, n'étant pas limité par une suture en arrière, Arêtes frontales rudimentaires.

Mandibules pointues, sans dents.

Yeux et ocelles grands, séparés du bord postérieur de la tête par un espace considérable; cet espace comprenant chez l'unique espèce, dans la ligne médiane, une fossette demi-circulaire profonde.

Antennes de treize articles; scape court; funicule légèrement épaissi au bout.

Corselet long et étroit; scutellum non proéminent.

Pattes courtes et épaisses, fémurs creusés en gouttière en dessous, tibias avec un long éperon.

Aile antérieure comme chez *Ænictus :* le ptérostigma est grand et large et la cellule radiale est ouverte; deux cellules cubitales fermées.

Pétiole en forme de trapèze, avec les angles postérieurs saillants.

Gastre fort long, cylindique.

Stipes hérissé de poils. Lame subgénitale comme chez *Ænictus.*

Ouvrière et femelle inconnues.

Distribution géographique de l'espèce. — L'on ne connaît jusqu'ici qu'un exemplaire du Congo.

1. *A. fossiceps*, Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 49 (1901). Congo.

4. Genus ÆNICTUS, Shuckard

Ænictus. Shuckard, Ann. Mag. Nat. Hist. Vol. 5, p. 266 (1840), ♂.
Typhlatta. Fred. Smith, Journ. Linn. Soc. Lond. Vol. 2, p. 79 (1857), ♀.
Eciton (part.). Fred. Smith, Cat. Hym. Brit. Mus. Vol. 6, p. 153 (1858).
Alaopone (part.). Ern. André, Spéc. Hym. Eur. (2), Suppl. p. 2 (1885).
Dorylus (Shuckardia) (part.). Emery, Zool. Jahrb. Syst. Vol. 8, p. 703 (1895).

Caractères. — *Ouvrière.* — Monomorphe, taille variant dans chaque espèce dans d'étroites limites.

Epistome formant un bord étroit le long de la bouche.

Arêtes frontales verticales, rapprochées entre elles, courbées autour de l'articulation des antennes et se continuant en une carène des joues qui limite à l'extérieur la fosse antennaire.

Mandibules dentées.

Pas d'yeux.

Antennes de dix articles, le dernier pas sensiblement plus épais que les précédents.

Sutures du corselet faiblement imprimées, ou sur le dos pas de sutures du tout. Epinotum inerme.

Pattes plus ou moins grêles, avec un éperon rudimentaire.

Postpétiole étroit, séparé du segment suivant; avec le pétiole, il forme un pédoncule de deux articles. Gastre court, ovale.

Femelle. — Epistome, arêtes frontales, yeux et antennes comme chez l'ouvrière.

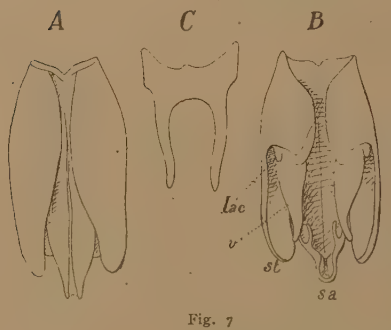

Fig. 7

Mandibules étroites, pointues.

Pas de sutures distinctes sur le dos du corselet.

Pétiole nodiforme.

Postpétiole en forme de cloche, beaucoup plus large que le pétiole et pas séparé des segments suivants; le pédoncule est ainsi constitué par un seul article.

Gastre long, cylindrique, pointu à l'extrémité; hypopygium dépassant un peu le pygidium.

Mâle. — Épistome extrêmement court, s'insinuant entre les arêtes frontales; celles-ci courtes.

Mandibules pointues, sans dents.

Yeux et ocelles bien développés, parfois très gros; les ocelles placés au sommet de la tête.

Antennes de treize articles; scape épais, parfois foliacé; funicule aminci à l'extrémité.

Scutum du mesonotum voûté, surplombant le pronotum; scutellum proéminent; épinotum court, en pente abrupte.

Pattes ordinairement grêles, tibias avec un éperon rudimentaire.

L'aile antérieure a le ptérostigma grand et large; cellule radiale ouverte; une seule cellule cubitale fermée; une cellule discoïdale.

Pétiole transversal, aplati ou creusé en dessus.

Gastre cylindrique ou en massue.

Armure génitale entièrement rétractile; lamina annularis étroite; stipes massif, recouvrant latéralement la volsella; lacinia très petite; sagittæ différant considérablement dans leur partie terminale. Lame subgénitale en fourche à branches linéaires, parallèles, largement espacées.

Ethologie. — Nids souterrains. L'*Ænictus punensis*, Forel, ainsi que l'a observé Wroughton (1). marche en chasse à découvert en colonnes admirablement disciplinées. C'est là à peu près tout ce qui a été publié sur les mœurs de ce genre nombreux. Je suppose que beaucoup d'espèces conduisent une vie complètement souterraine. Les mâles viennent le soir à la lumière.

Type du genre : *Ænictus ambiguus*, Shuckard.

Distribution géographique des espèces. — Toute l'Afrique; la région Indienne(2), y compris les îles de la Sonde et Célèbes; la Nouvelle-Guinée et le nord-est de l'Australie.

ESPÈCES DE LA RÉGION INDIENNE ET AUSTRALIENNE

a) *Espèces fondées sur l'ouvrière*

(Chez l'*Æ. wroughtoni*, le mâle et l'ouvrière ont été trouvés ensemble).

1. *Æ. aitkeni*, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 465, 475 (1901). — Ouest de l'Hindoustan.
   Æ. aitkeni, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 19, f. 18 (1903).
2. *Æ. aratus*, Forel, Ann. Soc. Ent. Belg. Vol. 44, p. 74 (1900). — Queensland.
3. *Æ. binghami*, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 465, 475 (1901). — Assam, Birmanie, Tenasserim.
   Æ. binghami, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 18, f. 17 (1903).
4. *Æ. biroi*, Forel, Ann. Mus. N. Hung. Vol. 5, p. 10 (1907). — Ceylan.
5. *Æ. brevicornis* (Mayr), Verh. Zool.-bot. Ges. Wien, Vol. 28, p. 668, 669 (1878) (*Typhlatta brevicornis*). — Hindoustan.
   Æ. brevicornis, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 466 (1901); Bingham, Fauna Brit India, Hym. Vol. 2, p. 21 (1903).
6. *Æ. ceylonicus* (Mayr), Sitzungsb. Akad. Wien, Vol. 53, p. 505 (*Typhlatta ceylonica*). — Hindoustan et Ceylan.
   Æ. ceylonicus, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 466. 477 (1901); Bingham, Fauna Brit. India, Hym. Vol. 2, p. 22 (1903).
   var. latro, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 466, 477 (1901). — Poona.
   subsp. peguensis, Emery, Ann. Mus. Stor. Nat. Genova (2), Vol. 14, p. 452 (1894); Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p 466 (1901); Bingham, Fauna Brit. India, Hym. Vol. 2, p. 22 (1903). — Birmanie.
7. *Æ. cornutus*, Forel, Ann. Soc. Ent. Belg. Vol. 44, p. 75 (1900). — Bornéo.
8. *Æ. currax*, Emery, Term. Füzet. Vol. 13, p. 310, pl. 8, f. 1 (1900). — Nouvelle-Guinée allemande
9. *Æ. fergussoni*, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 465, 473 (1901). — Travancore.
   Æ. fergussoni, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 18 (1903)

(1) Wroughton, « Our Ants », Part II, *Journ. Bombay Nat. Hist. Soc.* Vol. 7, p. 177 (1892).

(2) Voyez pour la détermination des espèces de l'Inde, les tables analytiques de : Forel, *Journ. Bombay Nat. Hist. Soc.* Vol. 13, p. 464-468 (1901); Bingham, *The Fauna of British India*, Hym. Vol. 3, p. 6-8, London (1903).

var. hogsoni, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 465, 474 (1901). — Birmanie.
var. montana, Forel, ibidem, p. 465, 474 (1901). — Darjeeling.
var. piltzi, Forel, ibidem, p. 465, 474 (1901). — Kanara, Surat.

10. *Æ. gracilis*, Emery, Rev. Suisse Zool. Vol. 1, p. 187, pl. 8 f. 1 (1893). — Bornéo.

11. *Æ. leviceps* (Fred. Smith), Journ. Linn. Soc. Lond. Vol. 2, p. 79 (1858) (*Typhlatta laeviceps*). — Tenasserim, Bornéo, Célèbes.
Æ. laeviceps, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 465 (1901); Bingham, Fauna Brit. India Hym. Vol. 2, p. 18 (1903).
var. smythiesii, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 465 (1901). — Assam, Perak.

12. *Æ. martini*, Forel, ibidem, p. 464, 473 (1901). — Birmanie, Malacca.
Æ. martini, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 17, f. 16 (1903).

13. *Æ. pachycerus* (Fred. Smith), Cat. Hym. Brit. Mus. Vol. 6, p. 153 (1858) (*Eciton*). — Probablement tout l'Hindoustan.
Æ. pachycerus, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 20, f. 19 (1903).
Typhlatta bengalensis, Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 28, p. 668 (1878).
Æ. bengalensis, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 465. 476 (1901).
var. continua, Forel, ibidem, p. 465, 476 (1901). — Calcutta, Ceylan.

14. *Æ. punensis*, Forel, ibidem, p. 466, 476 (1901). — Poona.
Æ. punensis, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 21 (1903).

15. *Æ. turneri*, Forel, Ann. Soc. Ent. Belg. Vol. 44, p. 75 (1900). — Queensland.

16. *Æ. wroughtoni*, Forel, ibidem, Vol. 34, C. R. p. 103 (1890), ♀ ♂; Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 466, 468 (1901). — Ouest et centre de l'Hindoustan.
Æ. wroughtoni, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 16 (1903).
var. sagei, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 466, 469 (1901), ♀. — Punjab.

b) *Espèces fondées sur le mâle*

17. *Æ. ambiguus*, Shuckard, Ann. Nat. Hist. Vol. 5, p. 268 (1840). — Nord et ouest de l'Hindoustan.
Æ. ambiguus, Westwood, Arc. Ent. Vol. 1, p. 79 (1842); Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, pl. 2, f. 16 (1859); Forel, Journ. Bombay, Nat. Hist. Soc. Vol. 13, p. 467 (1901); Bingham, Fauna Brit. India, Hym. Vol. 2, p. 9, f. 8 (1903).

18. *Æ. arya*, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 468, 472 (1901). — Kanara.
Æ. arya, Bingham, Fauna, Brit. India. Hym. Vol. 2, p. 8 (1903).

19. *Æ. certus*, Westwood, Arc. Ent. Vol. 1, p. 79 (1842). — Patria (?).
Æ. certus, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 9, pl. 1, f. 4 (1859); Bingham, Fauna Brit India, Hym. Vol. 2, p. 10 (1903).

20. *Æ. clavatus*, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 467, 471 (1901). — Ouest et nord de l'Hindoustan.
Æ. clavatus, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 12, f. 11 (1903).
var. kanariensis, Forel, Journ. Bombay, Nat. Hist. Soc Vol. 13, p. 467 (1902). — Kanara.

21. *Æ. clavitibia*, Forel, ibidem, p. 467, 472 (1901). — Bengale, Birmanie.
Æ. clavitibia, Bingham, Fauna, Brit. India, Hym. Vol. 2, p. 14, f. 14 (1903).

22. *Æ. feae*, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 27. p. 486, pl. 10, f. 4-9 (1889). — Birmania, Tenasserim.
Æ. feae, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 467 (1901); Bingham, Fauna Brit. India, Hym. Vol. 2, p. 14, f. 13 (1903).

23. *Æ. gibbosus*, Emery, in Dalla Torre, Cat. Hym. Vol. 7, p. 7 (1893). — Sumatra.
Æ. certus, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 27, p. 486, pl. 10, f. 10 (1889), nec Westwood.

24. *Æ. gleadowi*, Forel, Journ. Bombay Nat. Hist. Soc. Vol, 13, p. 468, 469 (1901). — Kanara.
Æ. gleadowi, Bingham, Fauna Brit. India. Hym. Vol. 2, p. 8 (1903).

25. *Æ. grandis*, Bingham, ibidem, p. 11, f. 9 (1903). — Birmanie.

26. *Æ. greeni*, Bingham, ibidem, p. 11 (1903). — Ceylan.

27. *Æ. javanus*, Emery, Ann. Soc. Ent. Belg. Vol. 40, p. 245, fig. (1896). — Java.

28. *Æ. latiscapus*, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 467, 471 (1901). — Poona, Birmanie.
Æ. latiscapus, Bingham, Fauna Brit. India. Hym. Vol. 2, p. 15, f. 15 (1903).
29. *Æ. longi*, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 467, 470 (1901). — Assâm, Birmanie.
Æ. longi, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 13, f. 12 (1903).
30. *Æ. moczaryi*, Emery, Term. Füzet. Vol. 25, p. 152, fig. (1902). — Nouvelle-Guinée allemande
31. *Æ. obscurus*, Fred. Smith, Journ. Linn. Soc. Lond. Vol. 8, p. 79 (1864). — Nouvelle-Guinée.
32. *Æ. pubescens*, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 10, pl. 2, f. 17 (1859). — Nord de l'Hindoustan.
Æ. pubescens, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 469 (1908); Bingham, Fauna Brit. India, Hym. Vol. 2, p. 10 (1903).
33. *Æ. punctiventris*, Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 47 (1901). — Bornéo.
34. *Æ. shuckardi*, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 467, 471 (1901). — Bengale, Birmanie.
Æ. shuckardi, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 12, f. 10 (1903).
35. *Æ. westwoodi*, Forel, Journ. Bombay Nat. Hist. Soc. Vol. 13, p. 467, 469 (1901) (*Æ. ambiguus* var.). — Ouest de l'Hindoustan.
Æ. westwoodi, Bingham, Fauna Brit. India, Hym. Vol. 2, p. 10 (1903).

ESPÈCES D'AFRIQUE

a) *Espèces fondées sur l'ouvrière*

36. *Æ. decolor* (Mayr), Verh. Zool.-bot. Ges. Wien, Vol. 28, p. 668 (1878) (*Typhlatta decolor*). — Afrique australe.
Æ. decolor, Dalla Torre, Cat. Hym. Vol. 7, p. 7 (1893).
37. *Æ. eugenii*, Emery, Ann. Soc. Ent. Fr. Vol. 63, p. 17, pl. 2, f. 1-4 (1895). — Transvaal.
38. *Æ. mariae*, Emery, ibidem, p. 18, pl. 2, f. 5-7 (1895). — Transvaal.
var. natalensis, Forel, in Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 49 (1901). — Natal.
39. *Æ. rixator*, Forel, in Emery, ibidem, p. 48 (1901). — Natal.
40. *Æ. rotundatus*, Mayr, Ann. Mus. Wien, Vol. 16, p. 1 (1901). — Cap.
41. *Æ. steindachneri*, Mayr, ibidem, p. 2 (1901). — Orange.

b) *Espèce fondée sur la femelle*

42. *Æ. abeillei* (Ern. André), Deuxième Suppl. aux Fourmis, p. 2 (1885) (*Alaopone abeillei*); Spec. Hym.-Eur. Vol. 2, p. 855 (1886). — Oran.
Æ. abeillei, Emery, Bull. Soc. Ent. Ital. Vol. 33, p. 43-47, f. 1, 2 (1901); Archivio Zool. Vol. 2, p. 111-113, f. 8, 9 (1904).
Dorylus (Shuckardia) abeillei, Emery, Zool. Jahrb. Syst. Vol. 8, p. 740 (1895).

c) *Espèces fondées sur le mâle*

43. *Æ. bottegoi*, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 39, p. 41 (1899). — Somalie.
44. *Æ. fuscovarius*, Gerstäcker, Monatsb. Akad. Berl. p. 262 (1858). Peters' Reise Mozamb. Zool. Vol. 5, p. 501, pl. 32, f. 1 (1862). — Mozambique jusqu'à Somalie.
Æ. fuscovarius, Emery, Zool. Jahrb. Syst. Vol. 8, p. 747 (1895).
var. magrettii, Emery, Ann. Soc. Ent. Fr. Vol. 60, p. 569, pl. 15, f. 13, 14 (1891); Ann. Mus. Stor. Nat. Genova, Vol. 32, p. 110, fig. (1892); Zool. Jahrb. Syst. Vol. 8, p. 747 (1895). — Soudan.
Æ. inconpicuus (? Westwood), Ern. André, Ann. Mus. Stor. Nat. Genova, Vol. 21, p. 539 (1884), nec Westwood.
45. *Æ. hamifer*, Emery, Ann. Mus. Stor. Nat. Genova, Vol. 37, p. 153, fig. (1896). — Somalie.
46. *Æ. inconspicuus*, Westwood, Trans. Ent. Soc. Lond. Vol. 4, p. 237, pl. 14, f. 4 (1847). — Afrique australe.
Æ. inconspicuus, Fred. Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 10, pl. 2, f. 15 (1859).

47. *Æ. luteus*, Emery, Ann. Soc. Ent. Fr. Vol. 60, p. 568, pl. 15, f. 11, 12 (1891). Sierra Leone.
48. *Æ. moebii*, Emery, Zool. Jahrb. Syst. Vol. 8, p. 747, f. NN (1895). Togo.
49. *Æ. rougieri*, Ern. André, Bull. Soc. Ent. Fr. p. 191 (1893). Tunisie.

3. TRIBUS LEPTANILLINI, EMERY

Ne comprend qu'un genre.

1. GENUS LEPTANILLA, EMERY

Leptanilla. Emery, Bull. Soc. Ent. Ital. Vol. 2, p. 196 (1870); Archivio Zool. Vol. 2, p. 107 (1904) Santschi, Rev. Suisse Zool. Vol. 15, p. 305 (1907).

Caractères. — *Ouvriere.* — Monomorphe, de très petite taille.

Epistome formant un bord étroit le long de la bouche, s'avançant parfois en deux lobes, se prolongeant entre les arêtes frontales. Celles-ci courtes; pas de carène aux joues.

Mandibules étroites, dentées. Palpes maxillaires et labiaux d'un seul article.

Pas d'yeux.

Antennes de douze articles à funicule filiforme.

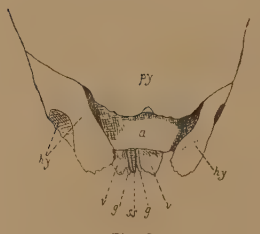

Fig. 8.

Suture pro mésonotale marquée, les autres sutures dorsales du corselet entièrement effacées; épinotum inerme.

Pattes courtes, tibias avec un éperon pectiné, ongles simples.

Pétiole et postpétiole nodiformes à peu près d'égale largeur, constituant un pédoncule de deux articles. Gastre ovale allongé.

Femelle. — Tête en général comme chez l'ouvrière.

Corselet avec une suture dorsale avant le milieu. Cette suture sépare le pronotum (1) des autres segments, qui ne sont pas distincts.

Pétiole nodiforme.

Segment postpétiolaire n'étant séparé des segments suivants par aucun étranglement; il fait partie du gastre. Celui-ci long.

Le cloaque est ouvert : il laisse voir le segment anal et l'aiguillon. L'hypopygium dépasse considérablement le pygidium et a deux lobes latéraux réfléchis sur le dos.

Mâle. — Tête plus ou moins en rectangle allongé, parfois rétrécie en avant.

Epistome et arêtes frontales à peu près comme chez l'ouvrière.

Mandibules très courtes, à pointe arrondie, sans dents. Palpes maxillaires et labiaux d'un seul article.

Yeux relativement petits, rapprochés de la bouche; ocelles près du bord occipital.

Antennes de treize articles; scape au plus de la longueur des deux articles suivants, pris ensemble; funicule filiforme, le dernier article plus long.

(1) Et non le mésonotum, comme je l'avais dit par erreur dans un travail précédent (*Archivio Zool.* Vol. 2, 1004). Le stigmate qui est couvert par le petit lobe du segment antérieur à cette suture représente donc le premier stigmate thoracique et non le deuxième.

Corselet déprimé, le scutellum non proéminent.

Pattes grêles, munies d'un éperon à la deuxième paire et de deux à la troisième.

Ailes sans ptérostigma ni aucune nervure.

Pétiole nodiforme; postpétiole nullement distinct du gastre; celui-ci plus ou moins allongé.

Armure génitale non rétractile : lamina annularis large et assez déprimée; stipes rétréci à l'extrémité; volsella grêle. Lame subgénitale bifurquée.

Ethologie. — Vie souterraine très cachée. La *L. revelierei*, Emery, a été trouvée sous des pierres profondément enfoncées; la *L. theryi*, Forel, en tamisant des feuilles mortes. Les mâles viennent à la lumière.

Type du genre : *Leptanilla revelierei*, Emery.

Distribution géographique des espèces. — Corse, Sardaigne; littoral Nord de l'Afrique, du Maroc jusqu'à la Tunisie; Singapore.

a) *Espèces fondées sur l'ouvrière*

1. *L. havilandi*, Forel, Ann. Soc. Ent. Belg. Vol. 45, p. 373 (1901). — Singapore.
2. *L. revelierei*, Emery, Bull. Soc. Ent. Ital. Vol. 2, p. 196, pl. 2, f. 2, 7 (1870), ♀♀. — Corse, Sardaigne.
   L. revelierei, Ern. André, Spec. Hym. Eur. Vol. 2, p. 269, pl 16, f. 4, pl. 17, f. 1 (1882); Emery, Archivio Zool. Vol. 2, p. 108, f. 1-4 (1904), ♀.
   var. bimaculata, Emery, Bull. Soc. Ent. Fr. p. 20, fig. (1899). — Corse.
   subsp. chobauti, Emery, ibidem, p. 20 (1899). — Tanger.
3. *L. theryi*, Forel, Ann. Soc. Ent. Belg. Vol. 47, p. 252 (1903). — Algérie orientale.
   L. theryi, Emery, Archivio Zool. Vol. 2, p. 110, f. 5, 6 (1904).
4. *L. vaucheri*, Emery, Bull. Soc. Ent. Fr. p. 19, fig. (1899). — Tanger.

b) *Espèces fondées sur le mâle*

5. *L. exigua*, Santschi, Ann. Soc. Ent. Fr. Vol. 77, p. 519, f. 1, 3 (1909). — Tunisie : Kairouan.
6. *L. minuscula*, Santschi, Rev. Suisse Zool. Vol. 15, p. 309, f. 3 (1907); Ann. Soc. Ent. Fr. Vol. 77, p. 520, f. 2 (1909). — Kairouan.
7. *L. tanit*, Santschi, Rev. Suisse Zool. Vol. 15, p. 310, f. 2 (1907). — Kairouan.
8. *L. tenuis*, Santschi, ibidem, p. 307, f. 1 (1907). — Kairouan

EXPLICATION DE LA PLANCHE

Fig. 1. *Dorylus (Anomma) nigricans*, Illiger, soldat, 3/1.
— 1*b*. — — — — femelle, 2/1.
— 1*c*. — — — — — tête de face.
— 1*d*. — — — — mâle, 2/1.
— 1*e*. — — — — — tête de face.
— 2. *Eciton hamatum*, Fabricius, soldat, 3/1.
— 3. — *(Labidus) coecum*, Latreille, soldat de Santa Catharina (1), 3/1.

(1) De cet Etat du Brésil, j'ai reçu à plusieurs reprises des soldats vraiment énormes; je présume que leurs mâles sont représentés par la var. *jurinei*, Shuckard, également de taille avantageuse. Sur la planche, la figure porte par erreur le signe ♀ au lieu de ♂.

Fig. 4. *Eciton (Acamatus) schmitti*, Emery, ouvrière, 5/1.
— 4*b*. — — — — femelle, 5/1.
— 4*c*. — — — — mâle, 5/1.
— 4*d*. — — — — — tête de face.
— 5. *Ænictogiton fossiceps*, Emery, mâle, 7/1.
— 5*b*. — — — — tête de face plus grossie.
— 6. *Ænictus binghami*, Forel, ouvrière, 6/1.
— 7. — *hamifer*, Emery, mâle, 7/1.
— 8. *Leptanilla theryi*, Forel, ouvrière, 24/1.
— 9. — *minuscula*, Santschi, mâle, 35/1 (d'après Santschi).

Toutes les figures, excepté la dernière, sont originales.

EXPLICATION DES FIGURES INTERCALÉES

Fig. 1 (page 6). Têtes du plus grand soldat, de deux ouvrières de dimensions différentes et d'un pygmée de *Dorylus affinis*, Shuckard, dessinées au même grossissement.

— 2 (page 6). Cloaque de *Dorylus* (*Alaopone*) *conradti*, Emery, ♀ : *py*, pygidium; *hy*, hypopygium; 7, septième stigmate abdominal (huitième en y comptant le stigmate de l'épinotum); *a*, segment anal; *ss*, soies de l'aiguillon.

— 3 (page 6). Armure génitale de *Dorylus helvolus*, Linné, ♂ : A, de profil; B, vue dorsale; C, vue ventrale; D, lame subgénitale; *la*, lamina annularis; *st*, stipes; *v*, volsella; *sa*, sagittæ.

— 4 (page 17). Armure génitale d'*Eciton* (*Labidus*) *coecum*, Latreille, ♂ : A, ensemble vu de profil; B, stipes vu du côté médian; C, sagitta isolée; *la*, lamina annularis; *sq*, squamula; *st*, stipes; *v*, volsella; *sa*, sagitta.

— 5 (page 19). Mandibules d'une série d'*Eciton hamatum*, Fabricius : de *a*, qui représente une mandibule de soldat, l'on suit tous les passages à la plus petite des ouvrières; *e*, *e'* représentent la même mandibule de face et de profil.

— 6 (page 22). Mandibules d'une série d'*Eciton* (*Labidus*) *coecum*, Latreille, depuis le soldat le plus grand de Santa Catharina (Brésil) jusqu'à l'ouvrière minima.

— 7 (page 28). Armure génitale d'*Ænictus feae*, Emery, ♂ : A, vue dorsale; B, vue ventrale; C, lame subgénitale; *st*, stipes; *v*, volsella; *lac*, lacinia; *sa*, sagittæ.

— 8 (page 32). Extrémité du gastre de *Leptanila revelierei*, Emery, ♀ : *py*, pygidium; *hy*, hypopygium; *a*, segment anal; au delà de l'anus, l'on voit les parties désagrégées de l'aiguillon; *v*, valvules; *g*, gorgeret; *ss*, soies de l'aiguillon.

Bologne, 15 Décembre 1909.

LEPIDOPTERA

FAM. GEOMETRIDÆ

SUBFAM. BREPHINÆ

LEPIDOPTERA HETEROCERA

FAM. GEOMETRIDÆ

INTRODUCTION — SUBFAM. BREPHINÆ

by Louis B. PROUT

WITH 1 COLOURED PLATE

INTRODUCTION TO THE STUDY OF THE FAMILY

THE family *Geometridae* has been recognized as a natural and generally well-defined section of the Lepidoptera ever since the institution of our modern system of nomenclature by Linnæus in 1758. In the tenth edition of his *Systema Naturae* (Vol. 1, p. 496) the great Swede proposed dividing his unwieldy genus *Phalaena*, for convenience of reference, into seven sections — or, in modern phraseology, subgenera — the third of which was « Geometræ », characterized as « Alis patentibus horizontalibus quiescentes », and subdivided again primarily according to the structure of the antennæ (« pectinicornes » and « seticornes ») and secondarily according to the form of the hindwings (« angulatis » or « rotundatis »). As a further distinction of the Geometræ — and that from which their name was derived — he noted that the larvæ possessed only ten legs, resulting in (or resulting from) their peculiar and characteristic mode of progression. Linnæus never used the name *Geometra* in the singular, except trinomially in conjunction with *Phalaena ;* and he continued to use *Phalaena* as the binomial (see p. 502, « Facies *Ph. jacobaeae* », etc., etc. ; also Amoen. Acad., passim). Considering how small a proportion of the larvæ was then known, he showed a very true perception of the Geometrid character, though he included a few slender-bodied species of other families which have since had to be removed, such as the species of *Drepana*, *Eurhypara*, *Nymphula* and *Nyctemera*, and (very excusably) excluded *Dysphania militaris*.

Fabricius in 1775 (*Syst. Ent.* p. 619) first raised the *Geometridae* to full generic rank, although he here (and until his Supplementum of 1798) united them with the *Pyralidae*. He used the generic name *Phalaena* for this restricted section of the Heterocera, and there can be little doubt that the

comparatively few subsequent authors who have followed him in his nomenclature have acted according to the letter of the law of zoological nomenclature (1), and that, strictly speaking, the family should be called *Phalaenidae* rather than *Geometridae;* but inasmuch as several prominent Lepidopterists have agreed to treat the name *Phalaena* (*Phalaenae*) as of *super*-family value, it has been thought expedient, in a work which is the joint production of many collaborators, to adhere to the more commonly-used name of *Geometridae*. Schiffermüller, later in 1775 (*Syst. Verz. Schmetterl. Wiener Gegend*, p. 95-117), and Kluk in 1780 (*Zwierz. Hist. Nat.* Vol. 4, p. 102) commenced to use *Geometra* binomially for this family in a purified form.

The first attempt to subdivide the *Geometridae* proper into genera was made by Haworth in 1802. In his *Prodromus Lepidopterorum Britannicorum* he restricted *Geometra* (p. 20) to the species having « Antennæ masculinæ pectinatæ. Larva geometra. Corpus rarissime crassum »; and used *Phalaena* (p. 24) for those having « Antennæ, oculo inarmato, setaceæ. Corpus semper gracile. Larva geometra. »

In the same year two other authors, believing themselves to be dealing with other branches of the Lepidoptera, introduced genera which have to be considered in relation to Geometrid classification. These were Latreille (*Hist. Nat. Crust. et Ins.* Vol. 3, p. 415), who erected a genus *Botys*, and Schrank (*Fauna Boica*, Vol. 2 (2), p. 162), who provided *Scopula* for *paludalis* (= *ornata*, Scopoli) and *dentalis*, placed in the order in which they are here given, and the former alone agreeing with the diagnosis, therefore declared type (*The Entomologist*, Vol. 39, p. 266). The question of *Botys*, Latreille, is somewhat more complicated, but it is shown elsewhere (*The Entom. Record*, Vol. 20, p. 141) that the type is *angustalis*, Schiffermüller, and that its employment in the *Geometridae* by Moore and Kirby is due to misapprehension.

Hübner in his *Tentamen determ. digest. Lepid.*, in 1806, divided the *Geometridae* into seventeen uncharacterized « Stirpes », the beginning of a classificatory scheme which was developed in his later works. As each Stirps name was unfortunately used in the singular number and in binomial conjunction with the name of one species (as an illustration of it), several eminent entomologists have held them to be valid genera; but on account of the absence of proof that the *Tentamen* was really published, besides a number of other weighty considerations, the majority has decided against them, and to this decision we here bow.

Leach in 1814 (*Zool. Miscell.* Vol. 1, p. 79) extracted one genus, *Ourapteryx*, from the heterogeneous mass, and the following year (*Edinb. Encycl.* Vol. 9 (1), p. 134) he gave his full scheme of classification of the « tribe » (family) *Phalaenides*. He adopted five « families » (subfamilies), the first two of which were *Phalaenida* and *Geometrida* (*Phalaeninae* and *Geometrinae* in modern nomenclature), and erected in these a few indifferently-characterized genera which marked at least some slight advance in classification. The *Phalaenida* (« larvæ with twelve feet ») comprised only the genus *Phalaena*, typified by *P. margaritata*, Linnæus, but the names, subfamily and generic, are untenable; the *Geometrida* (« larvæ with ten feet ») were divided into six genera : *Biston*, *Geometra*, *Ourapteryx*, *Abraxas*, *Bupalus* and *Hipparchus*, according to the ♂ antennæ, palpi, build of body, shape of wings and their position at rest. His *Geometra* corresponded to the typical section as established by Lamarck in 1801 (see infra), the other five offered valid new conceptions.

Lamarck in 1816 (*Hist. Nat. Anim. sans Vert.* Vol. 3, p. 568) erected *Campaea* for the « Phalénides » with an extra pair of claspers, and although he included under his genus several Noctuids, of the genera *Plusia* and *Euclidia*, Stephens' perfectly legitimate restriction of it to the first species, *margaritata*, Linnæus, necessitates its mention here (= *Phalaena*, Leach, in err.).

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(1) *International Code of zoological Nomenclature*, art. 29 : « If a genus is divided into two or more restricted genera, its valid name must be retained for one of the restricted genera. »

Treitschke in 1825 (*Die Schmetterlinge von Europa*, Vol. 5 (2), p. 421, seq.) gave his scheme of Geometrid classification, applying generic names to the unnamed sections into which Schiffermüller and Borkhausen had divided the Geometræ, and adding a few others without diagnoses, the descriptive work being postponed to a later volume (Vol. 6, 1827-28). In unfortunate ignorance of Leach's work, he proposed to restrict the name *Geometra* to Schiffermüller's Family B, the « emeralds » of English writers, the *Hemitheinae* of the present work. The remainder of his genera are *Ennomos, Acaena* (synonym of *Ourapteryx*, Leach), *Ellopia, Aspitates* (later written *Aspilates*), *Crocallis, Gnophos, Boarmia, Amphidasis, Psoidos* (later written *Psodos*), *Fidonia, Chesias, Cabera, Acidalia, Larentia, Cidaria, Zerene* (synonym of *Abraxas*, Leach), *Minoa* and *Idaea*. Most of these have passed into general currency, and some have been made the types of subfamilies.

In the same year (1825) Latreille (*Fam. Natur. du Règne animal*, p. 477) separated from the typical « *Phalaenites* » two genera, which were supplied with latinized names by Berthold in 1827 (*Fam. Thierr.* p. 484, 485); these were *Metrocampus* (gen. cælebs; synonym of *Campaea*, Lamarck) and *Hybernia* (gen. cælebs; « femelles aptères ou semi-aptères, ne pouvant voler »).

Later in 1825, or more probably not until 1826, appeared Hübner's noteworthy *Verzeichniss bekannter Schmettlinge*. It is just possible that this work was issued in parts at irregular intervals between 1818 and 1826, but in any case there is positive proof that the Geometrid portion did not appear before August 27, 1825, at earliest, and its correct location, for questions of priority, will certainly be between Treitschke's fifth volume (part 2) and Berthold; the only serious chronological difficulty that can arise is in regard to three of Curtis' genera published in 1826 (*Brit. Ent.* Vol. 3), viz. : *Charissa* (Febr. 1, 1826), *Alcis* (Apr. 1, 1826) and *Macaria* (Sept. 1, 1826). Hübner elaborated a complete scheme of classification, the seventeen Stirpes of his *Tentamen* being subdivided into many familiæ and coitus, the latter furnishing the binomials, and corresponding to the « genera » of other authors. The characters upon which his divisions were founded were superficial in the extreme, mostly wing-pattern or colour, or at best shape, although in one or two instances the hairiness of the body or the armature of the legs is mentioned. As a result of this superficiality, many of the genera are very incongruous; but very often Hübner's intimate acquaintance with the Lepidoptera enabled him to grasp the natural groupings in spite of the defectiveness of his characterizations. It has been proposed, by Grote, Tutt and others, to employ his stirps names, with modified endings, for the nomenclature of the modern families and subfamilies; but inasmuch as they are not founded upon valid generic names — those of the *Tentamen* having been decided to be inadmissible — this would be against the International Rules of Zoological Nomenclature.

Curtis (*Brit. Ent.*, 1824-39), Duponchel (*Hist. Nat. Lép.* Vol. 7 (2), 1829), Stephens (*Ill. Haust.* Vol. 3, 1831), Boisduval (*Gen. et Ind. Méth.*, 1840) and others added very many to the existent generic names, all of them ignoring those of Hübner's *Verzeichniss*, though Stephens later adopted them. Details cannot here be given, and it is doubtful whether they imply much real advance in generic classification. But in Oken's *Isis* for 1838 (p. 313), 1839 (p. 107-110) and 1843 (p. 244-264) Speyer gave some very important contributions, revising Treitschke's genera from the point of view of leg-structure and other good characters; and contemporaneously Herrich-Schäffer gave his first working-out of the *Geometridae* (Panzer's *Deutsch. Ins.* Heft 165 seq., 1839), introducing that venation system which he further elaborated in his *Systematische Bearbeitung*, Bde. 3 and 6 (1847-56), and which, in the hands of Lederer (*Die Spanner*, 1853), became the parent of the very useful Meyrick-Hampson classification which will be largely followed in the present work.

Duponchel's *Catal. Méth. Lépid. Eur.* (published in September, 1845, not in 1844 as given on the title-page) was intermediate between Herrich-Schäffer's earlier and later works. No use was made in it of the researches of Speyer and Herrich-Schäffer, no dichotomous tables of genera

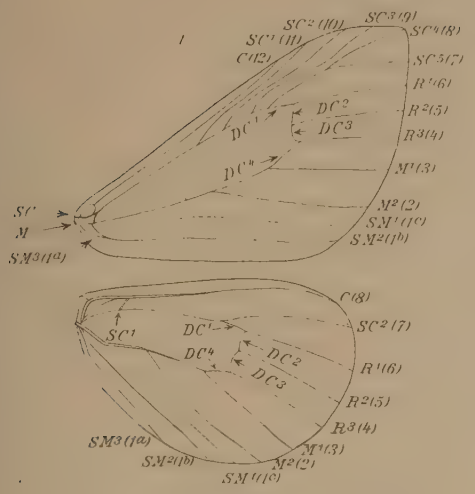
were given, and the diagnoses were founded chiefly on the antennæ, palpi, tongue and form of wing. The family was described as the « tribe » *Phalaenidae*, and was divided into eighteen « sub-tribes » (= subfamilies), with French names terminating in « -ites » (Ennomites, Chlorochromites, etc.) and usually a Latin equivalent in *-idi* added from Guenée's manuscripts (*Ennomidi*, Guenée in litt., etc.). Stephens in 1850 (*List Brit. Anim. Brit. Mus.* Vol. 5) adopted these as subfamilies, with uniform termination in *-idi*, and added four new ones, but the list is absolutely devoid of diagnostic matter. The Hübnerian genera were accepted, usually in subgeneric sense.

Bruand in 1846 (*Mém. Soc. Émul. Doubs*, Vol. 2 (2), p. 68) again reclassified the family in a superficial manner, making primary use of the old Linnæan character of the ♂ antennæ. Cohors I, with these pectinated or ciliated, comprised three « tribes » : *Amphidasidæ*, *Ennomidae* and *Fidonidae*, according to wing-form; cohors II, « antennæ simplices », contained two tribes, *Urapteridae* and *Cidaridae* (nom. præocc.; *Cidarites*, Lamarck, 1816 = *Cidaridea*, Gray, 1827 = *Cidaridae*, Forbes, 1844), also according to wing-form. Fifteen « subtribes » were recognized (also terminating in *-idae*), but almost all uncharacterized.

Herrich-Schäffer (*Syst. Bearb. Europ. Schmett.* Vol. 3, p. 5) characterized the « *Geometrides* » as having setiform antennæ, undivided wings, the forewing with one, the hind with at most two free inner-marginal veins and with a frenulum; two palpi, no ocelli, and the larvæ with only two (or in only a few species four) ventral legs, but always with the anal claspers developed. He considered only two subfamilies (Zünfte) available by accurate division, and proposed to call them *Phytometrides* and *Dendrometrides*. At first (p. 7) he intended to differentiate the former upon the full development of vein R^2 of the hindwing, and included therein such genera as his *Geometra* and *Acidalia*; but later (p. 38) he changed his view, and diagnosed the *Phytometrides* as having vein C of the hindwing anastomosed with the cell until near its end : thus really discovering the threefold division of the family (cfr. Meyrick, *Trans. Ent. Soc. Lond.* p. 57, 1892) while adhering to his arbitrary twofold plan. His genera were for the most part thoroughly well founded, a considerable number of structural characters being employed.

Lederer (*Die Spanner*, 1853) proposed to substitute four groups for Herrich-Schäffer's two : group I, with vein R^2 of hindwing well developed, C not anastomosing with the cell, R^2 of all wings much nearer to R^1 than to R^3, became the *Geometridae* (s. str.) of Meyrick = *Geometrinae* of Hampson (*Faun. Brit. Ind. Moths*, Vol. 3, p. 466); group II, with the first-named characters as above, but with R^2 midway between R^1 and R^3, the precursor of the *Sterrhinae* of Meyrick = *Acidaliinae* of Hampson (tom. cit. p. 425); group III, with R^2 of the hindwing weak or wanting, the *Selidosemidae* of Meyrick = *Boarmiinae* of Hampson (tom. cit. p. 139); and group IV, with C of hindwing strongly anastomosing with the cell, the *Hydriomenidae* of Meyrick = *Larentiinae* of Hampson (tom. cit. p. 329). He also gave as absolute a distinction which, though important, is not invariable, the presence of an areole (or accessory cell, vide infra) in the forewing in groups II and IV and its absence in groups I and III. Meyrick, in different papers, added two other families : the *Oenochromidae*, or *Monocteniadae* (*Oenochrominae* Hampson, tom. cit. p. 313), with C of hindwing free and R^2 present, not approximated to R^1; and the *Desmobathridae*, or *Orthostixidae* (*Orthostixinae*, Hampson, tom. cit. p. 318), with C of hindwing connected with cell by a bar near the base, R^2 present.

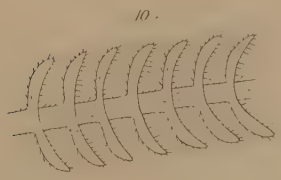
Some good classificatory work proceeding more or less on the same lines as Herrich-Schäffer's and Lederer's has been given by von Heinemann (*Schmett. Deutschl.* Vol. 1, 1859), Snellen (*Vlind. Ned., Macrolep.* 1867) and Aurivillius (*Nord. Fjär.* 1888-91). Less satisfactory, though a certain amount of it has borne the test of half a century of use, is Guenée's « Uranides et Phalénites » (*Spec. Gén. des Lépid.* Vol. 9-10, 1858), dealing with the world's Geometridæ (« Phalénites »). These Guenée divided into twenty-six families, some well-characterized, others the reverse. The better-grounded have been retained as subfamilies by Warren (*Proc. Zool. Soc. Lond.* 1893; *Nov. Zool.* Vol. 1, seq., 1894, etc.),



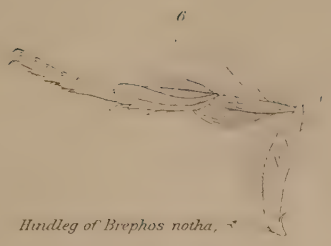
Venation of a Geometrid. (Venodes napiaria Guen.)

Brephos parthenias Linné, ♂

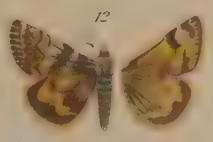
Egg of a Geometrid (Larentia multistrigaria Haw.)



Section of antenna of Brephos notha, ♂



Hindleg of Brephos notha, ♂



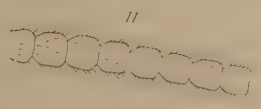
Brephos puella Esper, ♀

Humeral angle of hindwing of a Geometrid (Xanthorhoë montanata Schiff.)

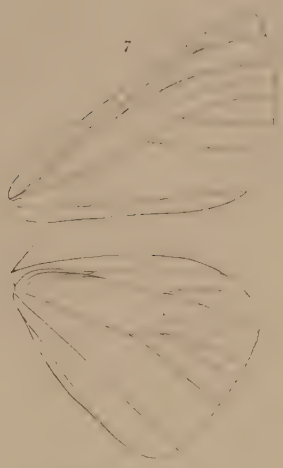
Brephos infans Möschler, ♂

Hindleg of Microgonia rutilaria Warr., ♂

Leucobrephos brephoides Walker, ♂

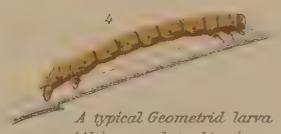


Section of antenna of Brephos parthenias, ♂



Venation of Brephos notha

Leucobrephos brephoides Walker, ♂



A typical Geometrid larva (Alcis repandata Linné).

Head of Brephos notha.

FAM. GEOMETRIDÆ

INTRODUCTION - SUBFAM. BREPHINÆ

and in several cases deserve at least tribal recognition. Guenée employed a considerable number of structural characters, but was much less consistent in his use of venation than his German contemporaries, and his work suffers from lack of rigid definition, and absence of tabular presentation of the characters of his families and genera.

In 1860-62 and 1866 Walker's *List Lep. Ins Brit. Mus.*, Parts 20-26 and 35, inundated nomenclature with badly defined genera, but added nothing to the history of classification, though very useful to the bibliographer.

In 1876 Packard (*Monogr. Geom. United States*) brought out an original classification of the North American *Geometridae*, embodying a large amount of anatomical research. Although he confessedly drew largely on Guenée's work, he entirely remodelled the scheme of subfamilies, reducing their number to eight only : *Larentinae* (= Lederer's groupe IV), *Fidoninae* (not well defined, though the venation is stated to be « quite characteristic »), *Caberinae* (a fairly natural group), *Goniacidalinae* (mainly Epiplemid, but with the curious Acidaliid (?) *Goniacidalia* as its type genus), *Acidalinae* (= Lederer's group II), *Geometrinae* (= Lederer's group I), *Boarminae* (= Lederer's group III, pro parte, not sharply delimited) and *Ennominae* (a fairly natural section of Lederer's group III). The forewing venation is often well figured and described, but the more reliable hindwing venation is strangely neglected. Synoptic tables of genera, though not of subfamilies, are given, but they are too uncritical to be of much use; nevertheless, as a pioneer in a previously unworked fauna, the book is of great value.

Numerous other faunistic works, containing more or less of new classification, but of secondary importance in this particular respect (such as those of Moore, Staudinger, Möschler, Butler, Druce, Swinhoe, Pagenstecher and others) must be passed over without mention. The principal recent classificatory works on the family have been those of Meyrick and Hampson, already referred to, von Gumppenberg's « Systeme Geometrarum Zonæ Temperatioris Septentrionalis » (*Nova Acta Acad. German.* Vol. 49-65, 1887-96) and Hulst's « Classification of the Geometrina of North America » (*Trans. Amer. Ent. Soc.* Vol. 23, 1896); to these may be added Poppius' two papers on the Finnish species (*Acta Soc. Faun. Flor. Fenn.*, 1887 and 1891), an important series of Australian revisions by Dr. A. J. Turner, at present in progress, and *A Review of our Geometrid Classification* (North American) by R. F. Pearsall, also in progress (*The Canad. Entom.* Vol. 36, 39), while further valuable contributions to the study will be found in Comstock's *Manual for the Study of Insects* and one or two memoirs on special subjects, such as Walter's « Palpus Maxillaris Lepidopterorum » (*Jena. Zeit. Nat.* Vol. 18). Meyrick's work is characterized by rigid precision and is very helpful for analytical purposes, although his logical application of his findings from a limited number of characters has resulted in occasional large genera which seem to the ontogenist very unnatural. Hampson's is also very valuable analytically, and whatever opinions may be held as to the exact biological significance of « secondary sexual characters », his refusal to recognize them as fully generic is at least convenient in the location of species of which one sex only is known. Hulst based his classification largely on that of Meyrick, but unfortunately abandoned that which is its chief merit — its unswerving consistency — and in very many instances his species do not conform to the characters of the genus to which he assigns them, nor even the genera to those of their subfamilies; he added to Meyrick's six subfamilies eight others, often of questionable validity or not true *Geometridae* : *Dyspteridinae* (= *Larentiinae* without a frenulum), *Brephinae* (see infra); *Fernaldellinae* (for a single genus with vein R^2 of hindwing absent and C anastomosing with cell); *Palyadinae* (R^2 of hindwing absent and frenulum absent); *Mecoceratinae* (which we accept as a tribe in the *Oenochrominae*); *Melanchroiinae* (R^2 of hindwing absent, R^2 of forewing stalked with R^1; Hulst gives another interpretation, which would place the group outside the *Geometridae*), and two which are now excluded from the family. Others which he used without characterization in Smith's and Dyar's lists of North American Lepidoptera need not be referred to here.

Poppius worked chiefly on the venation of the Finnish species, and gave a number of plates in illustration thereof. Accepting the primary division of Herrich-Schäffer's system, his earlier memoir (*Finland's Dendrometridae*) subdivides the « family *Dendrometridae* » into three « groups », which he designates *Odontoperidae*, *Boarmidae* and *Acidalidae*. The last-named comprises all the *Dendrometridae* in which vein R^2 of the hindwing is well-developed (= the *Geometridae* + *Sterrhidae* + *Monocteniadae* of Meyrick), the other two are mere sections of the *Selidosemidae* of Meyrick (vein R^2 of hindwing weak or wanting), and apparently admitted by the author to be less capable of rigid definition; the group *Odontoperidae* was intended to receive the species with acute apex, and with more or less uneven distal margin of both pairs of wings, or at least of one; the *Boarmidae* those with more rounded apex and even margins.

Von Gumppenberg repudiated venational systems, and attempted an entirely new classification, based almost exclusively on wing-form; but his work, laborious though it undoubtedly is, has never been taken seriously. He divided the family into four « acies », of which the second and third were subdivided into tribes in *-inae*.

Turner is following Meyrick rather closely, although his careful personal verification of the old facts, and analyses of the new discoveries lend a high value to his researches. Somewhat similarly, Pearsall has commenced where Hulst left off, but he is finding very much to revise and rearrange. In his first paper (*The Canad. Entom.* Vol. 36, p. 208, 209) Pearsall sunk the *Dyspteridinae* to *Hydriomeninae*, and in his second (tom. cit. p. 342, 343) he gave a synopsis of the residue, which included a characterization of those that had been left without diagnoses by Dr. Hulst, namely : *Monotaxinae*, hindwings, vein 5 present, strong, antennæ ♂ unipectinate; and *Sphecetodinae* (recte *Sphacelodinae*), hindwings, vein 5 absent, or a fold only, antennæ nearly joined at base.

Mr Warren, our leading specialist on the *Geometridae*, has published no complete systematic revision, his work in the *Novitates Zoologicae* and elsewhere being mainly devoted to the description of new genera and species; but his wide stores of knowledge of the family have been very freely drawn upon in the preparation of the present work, and a cordial acknowledgment is here made of the varied assistance received from him.

Our own working-out of the family for the Genera Insectorum will be seen to follow broadly the primary divisions of Meyrick and Hampson, these having been proved to give a practicable working basis for the provisional location of the world's *Geometridae*. We are fully alive to the fact, however, that the system is in part an artificial one, and that only two, at most, of the subfamilies (*Acidaliinae* and *Larentiinae*) seem likely to find strong phylogenetic support. Some investigations into the genitalia, which are being taken in hand by Dr. T. A. Chapman, Rev. C. R. N. Burrows and Mr. F. N. Pierce, may possibly open a new chapter in Geometrid classification; in particular, Dr. Chapman (in litt.) considers that a dichotomous arrangement is indicated thus : 1° tenth abdominal clearly marked off from ninth and distinctly articulated into dorsal and ventral pieces, suggesting a shark's jaw (typified by *Erannis*, but embracing numerous *Oenochrominae* as well as *Boarmiinae* of Hampson); 2° without this character. In the mean time the only alterations we have made in Meyrick & Hampson's scheme are the merging of the *Oenochrominae* and *Orthostixinae* (the given differential character being found entirely untenable) and the restoration, on the other hand, of the *Brephinae* to an independent position.

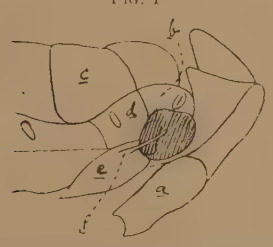
Most of the terms used in our descriptive work are such as are in common use among entomologists and will not be here defined. By « palpus » is always to be understood « labial palpus », according to general custom. Our nomenclature of the wing-veins (see **Plate, Fig. 1**) is the same as in Rothschild & Jordan's *Sphingidae* (*Gen. Ins.* Fasc. 57), although there is much to be said for

Woodworth's (1) resuscitation of the term « independents » for the three radials (veins 6, 5, 4 of Herrich-Schäffer), and perhaps for his other changes of name. By « discocellulars », when the word is employed without further qualification, is to be understood the two middle ones (DC^2 and DC^3). The « areole », or « accessory (auxiliary) cell », to which reference has already been made in connection with Lederer's system, is found above the distal part of the true cell in the forewing, and whatever its real morphology, will be here treated (after Meyrick) as due to anastomosis among veins SC^1, SC^2 and SC^3. A simple or single areole may be formed by anastomosis of SC^1 with the stalk of the others, or of SC^2 (arising out of SC^1) wit that of SC^3, and there is no reason why the term should not also be applied to the results of simple anastomosis of SC^{1-2} or of SC^{2-3}; a double areole is formed by anastomosis of SC^2 first with SC^1 and then with SC^3, whether SC^2 arise out of *cell* (making the proximal areole the smaller) or out of stalk of SC^{3-5} (making the distal smaller).

The family is of great extent, and it is impossible at present to estimate even approximately the number of species or of genera composing it. Its distribution is worldwide, and all the great faunistic regions are more or less rich in species, although in some parts of the southern hemisphere (parts of Africa, Argentina, etc.) it comes far behind the *Pyralidae* in point of numbers. Various northern species are common to Europe and North America, but only one or two species, such as *Orthonama fluviata*, Hübner, are nearly cosmopolitan.

General Characters of the Family. — The *Geometridae* as at present constituted may be characterized as follows : Small or moderate-sized (rarely large) moths, usually of slender build, the wings generally ample in proportion to the size of the body. Ocelli usually ill-developed or obsolete. Labial palpus usually porrect, rarely very stout, third joint rarely very long and scarcely ever with remarkable modification of shape or scaling. Maxillary palpus ill-developed, single jointed, or very rarely (*Ligdia*, ? etc.) with two joints. Tongue usually well-developed, though not abnormally long, the

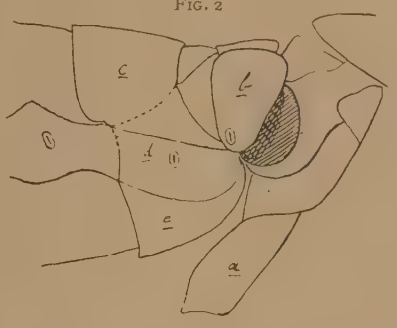
FIG. 1



a, hindcoxa; *b*, reduced pleura of first abdominal segment *c*, tergite of second segment; *d*, pleura of second segment, receiving the abdominal cavity; *e*, sternite of second abdominal segment; *f*, spine from ditto, projecting free over cavity.

Diagram of anterior part of abdomen of a Geometrid (*Sabulodes boarmidaria*, Oberthür), showing position of basal cavity (marked dark).

FIG. 2



a, hindcoxa; *b*, swollen pleural plate of first abdominal segment, with cavity beneath (tympanum); *c*, *d*, *e*, second abdominal segment : tergite, pleura, sternite.

Diagram of anterior part of abdomen of an Aganaid, sens. lat. (*Nyctemera consobrina*, Hopffer), showing position of basal cavity (marked dark).

terminal papillæ (« Saftbohrer ») with radial plates (2); occasionally (*Amphidasiicae*, etc.) obsolete. Antenna usually slender, variable in structure, but the shaft generally setiform, scarcely ever clavate or fusiform, a tendency to thickening distally being observable only, so far as we are aware, in *Cistidia* and in *Rhopalodes* and a few allied genera; usually closely scaled to the apex, commonly powdered or ringed

(1) « The Wing Veins of Insects », *Univ. Calif. Techn. Bull. Ent.* Vol. 1, n° 1 (1906).
(2) Vide Breitenbach, *Jena. Zeit. Nat.* Vol. 15, p. 195.

with dark scales. Thorax generally short, rarely crested, never so anteriorly. Tegulæ usually rounded, very rarely squared or rectangular. Abdomen with pleura of first segment reduced, pleura of *second* segment swollen to receive the basal cavity (the so-called « tympanum »), hence with the first stigma *above* the cavity(1) (**Fig. 1, 2**). Legs usually slender, foreleg well-developed. Femora seldom densely hairy. Hindtibia scarcely ever strongly hairy, but that of the ♂ often dilated and with a furrow or pocket on the inner side near the femoro-tibial joint, containing an expansible pencil of hairs (**Plate, Fig. 2**), a spinelike process from the sternite of the second abdominal segment (**Fig. 1,** *f*) correlated with the development of this hair-pencil, evidently employed in the process of spreading it out. Tarsi usually long, not hairy, hindtarsus occasionally abbreviated in those species in which the hindtibia is much dilated. Frenulum usually present, aborted or wanting in a few specialized genera. *Venation :* DC^3 usually oblique outwards, especially in hindwing, sometimes angulated outwards at the point of origin of R^2, especially in hindwing. Forewing with four or five subcostals(2), SC^4 and SC^5 stalked, usually with SC^3 also (3), anastomosis among subcostals very frequent; R^2 from discocellulars (usually from about middle or nearer to R^1 than to R^3), occasionally (*Melanchroia*, etc.) stalked with R^1, never (4) connate with or closely approximated at its base to R^3, SM^1 wanting, SM^3 short, usually running into SM^2, sometimes weak or wanting. Hindwing with C making a more or less prominent bend into the humeral angle (5), usually forked with a rudimentary vein running from near base of frenulum, never subparallel basally to SC; R^2 variable in position, but not connate with R^3, often weak or wanting; SM^1 wanting (represented by a fold in the wing), SM^3 usually short and running into inner margin, far more rarely running to distal.

The distinctive characters in the venation are : 1° the stalking of SC^4 with SC^5 in forewing; 2° the origin of R^2 of forewing apart from R^3; 3° the basal bend of C of hindwing; 4° the absence of SM^1. The first of these affords a ready means of separation from the *Uraniidae* and *Epiplemidae;* the second from Geometriform *Noctuidae*, *Drepanidae*, *Aganaidae* (*Hypsidae*), etc.; the third from *Notodontidae* and *Dioptidae* (see **Fig. 3, 4**); the fourth from *Pyralidae*. A few *Polyplocidae* which have been erroneously classed as *Geometridae* may be distinguished by the close approximation of C of hindwing to SC beyond the cell. As the delimitation of *Notodontidae* from the more robust among the *Geometridae* has sometimes proved a matter of difficulty, it may be pointed out that the short, often strongly hairy tarsi of the former, a tuft of hairs at the base of their antennæ, their generally more hairy body and wings, broader face, narrow forewing, relatively smaller hindwing, will usually be found helpful; while in many cases hairy eyes, upturned palpi, tuft of scales on inner margin of forewing, or other features not known, or scarcely known in the *Geometridae*, will afford further clues. In the venation, a connective bar between C and SC of hindwing towards middle of cell, without the special features which make the *Larentiinae* so easy to recognize, would indicate *Notodontidae;* while any intricate anasto-

FIG. 3.

Humeral angle of hindwing of a Notodontid, *Pheosia tremula*, Clerck, ♂.

FIG. 4.

Humeral angle of a Dioptid, *Phaeochlaena tendinosa*, Hübner, ♂.

(1) Vide Jordan, *Nov. Zool.* Vol. 12, p. 506, for a note on this evidently valuable taxonomic character.

(2) Except in *Goniacidalia*, which we have not yet been able to study.

(3) In the *Brephinae* SC^{3-4} are often coincident, and a similar occurence is sometimes found in *Apocheima pomonaria*; but as SC^5 is still stalked therewith, this is not exceptional from the family character. In two or three genera of *Larentiinae* (*Cataclysme*, *Mesotype*, *Zenophleps*, *Acodia*) a real exception occurs, resulting in the severance of SC^5 from the other subcostals, as will be explained under that subfamily.

(4) Except in *Mimaletis*, *Geodena*, *Ereutenea*, *Astyochia*, *Parallage*, and perhaps a few allies, some of which may possibly be later removed from this family. In *Cartaletis*, too, the position of R^2 varies; while in two or three Larentiine genera (*Operophtera*, etc.), where DC^3 is angled, the shortening of its lower part also leads to an approach between R^2 and R^3.

(5) Especially in the *Larentiinae* and some others; see **Plate, Fig. 1a**. Hardly noticeable in a few of the archaic Australian forms; compare the anomalous *Diceratucha* etc.

mosis of the subcostals of forewing, and in particular any contact of SC^1 with C or with SC^2, would point rather to *Geometridae*.

Von Gumppenberg (*Nova Acta Acad. German.* Vol. 49, p. 275, 277) thinks the form of the scales may yield differential characters in the *Geometridae*, and recommends their study. Schneider (*Zeitschr. Ges. Nat.* Vol. 51, p. 58) has touched this subject, and notes that there are, in general, prevalent types of scales for particular families, but does not pursure the research to subfamilies or genera. Characteristic for the *Geometridae* are scales with their lateral margins parallel distally, strongly convergent basad, marked by lateral striping (often ribbing), usually three- to six-toothed, the external teeth often longer than those between. Our own very limited observations suggest that broad (five- to six-toothed), well-ribbed scales are chiefly characteristic of *Larentiinae* and *Geometrinae* (= *Boarmiinae*, Hampson), smaller, narrower ones of the other subfamilies; but no sufficient investigations have yet been made.

According to Packard (*Mon. Geom. U. S.*, p. 17, 24, 26, 28, 32, 34) the *Geometridae* show also reliable distinguishing features in the anatomy of the head and thorax, and it is possible he may be right, though here again is a subject which has not been followed up; his own work is too ill-digested and inconclusive to be utilized here, and results in his removing from the family such undoubted Geometrids as *Euphanessa* and *Pachycnemia*.

Early Stages. — Egg usually ovoid in form, belonging to the « flat egg » division of Chapman (long axis normally horizontal, or nearly so, micropyle at one end of this long axis). Only quite exceptionally (*Ourapteryx* (1) ? etc.) is there a genuine approach to the « upright » type of egg. The sculpturing varies from being almost imperceptible to a strong hexagonal or polygonal pitting (**Plate, Fig. 3**), or in some cases longitudinal ribbing. Larva often bearing strong protective resemblance to twigs, specialized by the abortion or complete loss of some of the ventral claspers (prolegs) (**Plate, Fig. 4**); with very few exceptions, only those on the sixth and tenth abdominal segments persist, but in a few genera, such as *Colotois* (= *Himera*), *Campaea*, *Ellopia*, *Opisthograptis*, *Gonodontis*, *Declana* and some *Oenochrominae*, there is an additional pair on the fifth segment (in *Gonodontis* and *Opisthograptis* (2) also another pair on the fourth), though usually rudimentary, while in *Brephos* all the prolegs are present, but the first two pairs rudimentary and even the third pair not perfectly developed, hence scarcely disturbing the « ground-measuring » mode of progression which has given the family its name. The anal pair always strong, true « claspers », directed ventrad, not caudad as in many Lepidoptera. Pupa « obtect », with only the fifth and sixth abdominals free, and without power of progression. Not yet much studied in classificatory work on the family.

Subdivision of the Family. — If superfamily rank were given to the *Geometridae* (as has been done by Comstock, Hulst and Tutt explicitly, and by Herrich-Schäffer, Guenée, Poppius, Meyrick and others implicitly), three coördinate families might be admitted, as already indicated (in our historical account of the system of Herrich-Schäffer), and these divided again into subfamilies and tribes; but no artificial system, however elaborate, can connote all the grades of natural relationship, even in those very rare cases in which these are sufficiently well understood. In order to bring this section of the *Genera Insectorum* more nearly into line with others, we shall merely indicate the main groupings as follows, and deal with the *Geometridae* as consisting of six subfamilies.

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(1) Tutt, *Ent. Record*, Vol. 16, p. 54, Vol. 20, p. 201. shows that *Catascia myrtillata*, Thunberg (= *obfuscaria*, Hübner) has also, in a sense, an upright egg, but the descriptions (*Ent. Record*, Vol. 15, p. 339, Vol. 16, p. 54, Vol. 17, p. 162) make it clear that this is accidental only. Many « flat eggs » become accidentally « upright » by being attached at or near the nadir, without otherwise losing their characteristics. Again, the *Ennomos* eggs laid side to side may stand vertical to some twig which is not so much the governing factor in position as the previously-laid egg. So, too, is it with *Alsophila*.

(2) And in some Australian species, according to Anderson, *Vict. Nat.* Vol. 9, p. 91, who further states that *Mnesampela* larvæ are quite Noctuid in appearance, and with the full complement of prolegs.

Group A. — Vein R^2 of hindwing present, usually well developed, costal very rarely anastomosing with subcostal (1). Subfamilies *Brephinae, Oenochrominae* (= *Monocteniadae* and *Orthostixidae*, Meyrick), *Hemitheinae* (= *Geometridae*, Meyrick) and *Acidaliinae* (= *Sterrhidae*, Meyrick).

Group B. — Vein R^2 of hindwing well developed, C either anastomosing strongly with SC or (far more rarely) connected therewith by a bar beyond middle of cell. Subfamily *Larentiinae* (= *Hydriomenidae*, Meyrick).

Group C. — Vein R^2 of hindwing wanting, or reduced to a mere fold or thickening of the wing-membrane (non-tubular). Subfamily *Geometridae* (= *Selidosemidae*, Meyrick).

The four subfamilies placed under Group A do not admit of absolutely rigid definition by venation, occasional anomalies or intermediates occurring; nevertheless the following scheme holds for the overwhelming majority of cases, and leaves only occasional exceptions to be studied as they arise.

1. *Veins* SC^{3+4} *of forewing coincident or both running into costa* (2) . . . . . Subfam. Brephinæ.
   Vein SC^4 *of forewing not coincident with* SC^3, *running into apex or distal margin* . . . . . 2.
2. *Vein* R^2 *of hindwing (often also of forewing) arising much nearer to* R^1 *than to* R^3 Subfam. Hemitheinæ.
   Vein R^2 *of hindwing usually (and of forewing nearly always) arising from near middle of discocellulars* (3) . . . . . 3.
3. *Vein* C *of hindwing shortly fused with* SC *at a point near base* (4); C *of forewing free*, SC^1 *not free from* SC^2. . . . . Subfam. Acidaliinæ.
   Vein C *of hindwing usually free from* SC *throughout, sometimes connected therewith by a bar near base;* C *of forewing often anastomosed or connected with* SC^1; SC^1 *often free from* SC^2. . . . . Subfam. Œnochrominæ.

With regard to the nomenclature adopted, the generic names have been carefully revised in accordance with the International Code (5), and subfamily and tribal names — on which the Code is less definite — have, where practicable, been subjected to the like rules; that is to say, all family, subfamily and tribal names which have been proposed have been treated as of equal rank in nomenclature, and the law of priority has been observed in selecting those which are applicable, although necessarily a termination may have to be changed from *-idae* or *-idi* to *-inae* or *-icae*. The principle of a « type genus » for each subfamily, as set forth in the Code (Art. 4, 5) has been accepted, so that the inclusion of older (but non-typical) generic names does not invalidate that of a subfamily; e. g., *Hipparchus*, Leach (1815) in the subfamily *Hemitheinae*, Bruand (type *Hemithea*, Duponchel, 1829). In only one instance has a slight sacrifice been made to common usage, namely : the generic name *Phalaena* having been supplanted by *Geometra* (see supra) we consider it necessary to employ *Geometridae* and *Geometrinae* for *Phalaenidae* and *Phalaeninae*. The type of the genus *Geometra* (*Phalaena*) is *syringaria*, Linnæus, as has been shown by Kirby & Smith (*Proc. Internat. Congr. Zool.* 1898, App. A, p. 321); certainly no author prior to Lamarck (1801) attempted to « select a type » according to the requirements of the International Commission on

(1) The few exceptions will be noticed in their places.

(2) The small, oval eyes, long-haired face and legs etc. distinguish the *Brephinae* more readily than the venation; yet the position of SC^4 and SC^5 and the frequent disappearance of SC^3 are fairly characteristic.

(3) The exceptions are commonest, and most difficult, in the ill-defined assemblage *Œnochrominae*; see *Aplasta*, *Heliothea*, *Petovia*, *Marcodava*, *Monoctenia* *Œnochroma*, *Cernia*, *Hypographa*. In a few *Acidaliinae* in which the position of R^2 is Hemitheine (*Asellodes*, *Dasybela* etc.) the forewing venation (presence of areole, position of SC^2) is decisive.

(4) Occasional irregularities in the *Cyllopodicae* make that tribe resemble certain *Œnochrominae* in hindwing venation; but the sections to which they show most analogy (*Œnochromicae*, Groups II and III) almost invariably have C of forewing anastomosing or connected with SC^4, while in the *Cyllopodicae* it is free. Where the hindwing venation fails, a combination of aborted ♂ leg-structure with freedom of C and presence of areole will point to *Acidaliinae*. On an *ensemble* of characters, we therefore refer the *Cyllopodicae* to this last-named subfamily.

(5) The date given in brackets after our citation of the type of each genus is that at which such type became definitely fixed. The bibliographic reference for such fixation is always included in the synonymy. Where no date follows the type-citation, the selection is our own.

Nomenclature, and although Lamarck himself does not use the actual word « type », he definitely expresses his purpose of elucidating the genera by citing under each of them one well-known species etc. No useful purpose could be served by attempting to override Kirby's decision, for in 1810 Latreille actually cited *sambucaria*, Linnæus, as « type », and if this were adopted the familiar name of *Ourapteryx*, Leach, would be lost, while in any circumstances it is impossible to retain Treitschke's conception of *Geometra*. Billberg in 1820 (*Enum. Ins. in Mus. Billb.* p. 89) restricted *Geometra* in such wise as to include both *syringaria*, Linnæus, and Leach's *Geometra* (*Selenia*, Hübner, etc.).

On the relative value of various characters as generic or non-generic, systematists are not, and probably never will be in accord. We have endeavoured to avoid the two extremes — unwieldy genera which one feels must surely, when more thoroughly understood, prove to contain heterogeneous biological elements; and subdivisions founded on slight, intangible, or evidently inconstant imaginal distinctions. But where genera which might be considered open to the latter charge have *already* obtained some currency (e. g., *Oenochroma*, *Xyridacma*, *Barrama*, *Inurois*, etc.) we consider it expedient to maintain them so far as possible : i. e., when we find them susceptible of distinctive definition; for the general tendency of advancing knowledge is in the direction of the multiplication of genera, and premature « lumping » causes greater confusion than premature « splitting ».

SUBFAM. BREPHINÆ

Brephiæ. Hübner, Verz. bek. Schmett. p. 279 (1826 ?).
Phalænoidi. Guenée, Ann. Soc. Ent. Fr. Vol. 10, p. 217 (1841).
Phalænoidæ. Duponchel, Cat. Méth. Lép. Eur. p. 189 (1845).
Brephides. Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 2, p. 449 (1851).
Brephidæ. Snellen, Vlind. Nederl. Macrolep. p. 505 (1867).
Monocteniadæ (part.). Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1136 (1890).
Brephinæ. Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 316 (1896).

A small group of somewhat anomalous moths, which have been variously placed by systematists. The older authors took them to belong to *Bombyx* or *Noctua*, and even in recent times they have continued to be erroneously associated with the *Noctuidae*, or by von Linstow, *Berl. Ent. Zeitschr.* Vol. 52, p. 193, with the « Bombyces ». Some modern writers have accorded them full family rank, and several have noticed their resemblances to the *Geometridae;* but von Gumppenberg, in 1887, and Meyrick (independently), in 1890, were the first to refer them definitely to this family, the latter assigning them a position among his *Monocteniadae* (our *Oenochrominae*). They seem to represent either an archaic, or possibly a somewhat degenerate type. Only two genera, rather closely allied, are certainly known, though Möschler's diagnosis of the genus *Möschleria*, Saalmüller, suggests at least a possibility that a third — less nearly related in shape and antennal structure — may exist in the West Indies. The *Brephinae* show no appreciable affinity with the *Dioptidae*, nor indeed with any known family outside the *Geometridae;* their nearest relative among the *Oenochrominae* is probably the Australian genus *Dirce* (*Oenone* Meyrick) (1).

General characters of the Subfamily. — Head, thorax and abdomen more or less densely clothed with hair. Scaling of hindwing much mixed with hairscales. Eye small, oval. Face and palpus strongly long-haired. Palpus minute, concealed by the frontal hairs. Antennal shaft more or less hair-scaled. Tongue present. Legs short, femora and tibiæ long-haired, tibial spurs very short. Tarsi strongly spinulose. Frenulum present. Forewing usually with eleven veins, SC^{3+4} coincident or only separating shortly before apex, running into costa; hindwing with SC^2 very generally stalked with R^1, R^2 weak and slender, sometimes obsolescent.

The distinctive features of the subfamily, apart from those of the venation, are the small *oval* eye (see **Plate, Fig. 5**), very *small*, densely *hairy* palpus and hairy tibiæ, together with the sixteen-legged larva.

Geographical distribution of species. — Palæarctic and Nearctic.

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(1) *Dirce*, Prout, nov. nom. = *Oenone*, Meyrick, *Proc. Linn. Soc. N. S. Wales* (2), Vol. 4, p. 1194 (nec Savigny, 1817).

KEY TO THE GENERA

Hindwing with R^3 *and* M^1 *stalked* . . . . . 2. Genus LEUCOBREPHOS, Grote.
Hindwing with R^3 *and* M^1 *not stalked* . . . . . 1. Genus BREPHOS, Zincken.

1. GENUS BREPHOS, ZINCKEN

Brephos (Ochsenheimer, Schmett. Eur. Vol. 4, p. 96 (1816) indescr., ex Hübner, Tentamen, ined.); Zincken, Ersch & Gruber's Allg. Encycl. Wissensch. Vol. 12, p. 365 (1824).
Archiearis. Hübner, Verz. bek. Schmett. p. 279 (1826?).
Brepha. Curtis, Brit. Ent. Vol. 3, p. 121 (1826).
Catoxanthia. Sodoffsky, Bull. Soc. Nat. Moscou Vol. 6, p. 16 (1837).

Characters. — Palpus very small, third joint ovate. Antenna about one-half length of forewing, in ♂ either bipectinate with short clavate pectinations, or somewhat moniliform and shortly ciliated, in ♀ rather slender, nearly simple, pubescent. Legs short, hairy. Hindtibia in both sexes with all spurs present, short; that of ♂ with small hair-pencil (**Plate, Fig. 6**). Hindtarsus rather short and thick, strongly spinulose. ♂ genitalia with harpe simple, without trace of clasper or ampulla, uncus articulated to the tegumen, below the uncus a plate with subdentate or spinose edge (Pierce, *Genit. Noct.* p. 83, t. 32). Wing-expanse(1) 26-37 mm. Forewing rather narrow, angles well pronounced, costa slightly arched near base, then nearly straight, distal margin convex, somewhat oblique in ♂, less so in ♀, inner margin rather long, straight, cell more than half length of wing(2), SC^1 free, SC^2 out of stalk of $SC^{4\,5}$, SC^3 often absent (remaining coincident with SC^4), $SC^{4\text{-}5}$ (or $SC^{3\text{-}5}$) stalked from apex of cell, R^2 rather slender, M^1 approximated at its base to R^3; hindwing with cell long, C^1 closely appressed to SC for a distance, but not anastomosing, SC^2 and R^1 long-stalked, short-stalked or (rarely) connate, R^2 weak, sometimes obsolescent (especially in *notha*), M^1 connate with R^3, very rarely separate, SM^3 to inner margin rather near tornus.

LARVA. — Setæ greatly reduced, but tubercles remaining rather distinct, normal in arrangement, without secondary hairs. All abdominal legs present, but three anterior pairs about half aborted (Dyar, *Journ. New York Ent. Soc.* Vol. 3, p. 21).

PUPA. — Anal armature terminated in a curious transverse process (*Cambridge, Nat. Hist.* Vol. 6, p. 16. f. 205).

Type of the genus : *Brephos notha* (Hübner) = *Noctua notha*, Hübner = *Brepha parthenias*, Curtis (nec Linné) (1826).

Geographical distribution of species. — Palæarctic and Nearctic.

SECTION I. — Forewing with $SC^{3\text{-}4}$ usually stalked; hindwing with SC^2 and R^1 connate or quite short-stalked; ♂ with antenna pectinated(3). (**Plate, Fig. 7, 10**).

1. *B. notha* (Hübner). Europe, Central Asia, Algeria.
Bombyx vidua, Fabricius, Syst. Ent. p. 580 (1775) (nec Poda, 1761).

(1) It is not implied that size is a character of generic value, but rough measurements (from tip to tip of forewing, average setting) are given here and throughout because experience shows that they are frequently helpful as a partial clue in determination; it is rarely indeed that close congeners deviate extremely in size.
(2) The length of the cell is always to be reckoned to the cell-spot or approximately the middle of the discocellulars
(3) It would probably be justifiable to make two genera of our two sections; but the species seem so closely related biologically that we prefer to minimize the imaginal differences. We figure details from both sections.

Phalaena parthenias, Donovan, Brit. Ins. Vol. 7, p. 81, t. 246 (1799) (nec Linné).
Noctua notha, Hübner, Samml. Eur. Schmett. Noct. t. 74, p. 343, 344 (1802?).
Bombyx parthenius, Haworth, Lep. Brit. (1), p. 135 (1803).
Hemigeometra parthenias, Haworth, ibidem, (2), p. 269 (1809).
Brephos notha, Ochsenheimer, Schmett. Eur. Vol. 4, p. 96 (1816).
Archiearis notha, Hübner, Verz. bek. Schmett. p. 280 (1826?).
Brepha parthenias, Curtis, Brit. Ent. Vol. 3, p. 121 (1826).
[*Brephos*] *parthenioides*, nom. ined., fide Treitschke, Schmett. Eur. Vol. 5 (3), p. 384 (1826).
Brephos vidua, Speyer, Stett. Ent. Zeit. Vol. 24, p. 95 (1863).
Brephos nothum, Staudinger, Cat. Lep. (ed. 2), p. 143 (1871).

2. *B. puella* (Esper). — **Plate, Fig. 12.** — Central Europe.
Noctua puella, Esper, Schmett. in Abbild. Vol. 4 (1), t. 106, f. 2, 3 (1787); p. 163 (1789).
Phalaena Noctua caelebs, Hübner, Beitr. Vol. 1 (4), p. 21, t. 3, f. Q (1789).
Noctua spuria, Hübner, Samml. Eur. Schmett. Noct. t. 64, f. 345 (1802?).
Brephos puella, Ochsenheimer, Schmett. Eur. Vol. 4, p. 96 (1816).
Archiearis spuria, Hübner, Verz. bek. Schmett. p. 280 (1826?).
Archiearis puella, Walker, List Lep. Ins. Brit. Mus. Vol. 12, p. 842 (1857).

SECTION II. — Forewing with SC^{3-4} connate; hindwing with SC^2 and R^1 long-stalked; ♂ with antenna not pectinated. (**Plate, Fig. 8, 11.**)

3. *B. parthenias* (Linné). — Europe, Siberia, Kamtschatka.
Phalaena Noctua parthenias, Linné, Faun. Suec. p. 308 (1761).
? *Phalaena Noctua plebeja*, Linné, ibidem, p. 320 (1761).
Phalaena fulvulata, Pallas, Reise, Vol. 2, p. 732 (1773).
Phalaena Noctua glaucescens, Goeze, Ent. Beytr. Vol. 3 (3), p. 206 (1781).
Phalaena Geometra glaucofasciata, Goeze, ibidem, p. 387 (1781).
Noctua parthenias, Esper, Schmett. in Abbild. Vol. 4 (1), t. 85, f. 6 (1786); p. 53 (1787?).
Hemigeometra notha, Haworth, Lep. Brit. p. 269 (1809) (nec Hübner).
Brephos parthenias, Ochsenheimer, Schmett. Eur. Vol. 4, p. 96 (1816).
Archiearis parthenias, Hübner, Verz. bek. Schmett. p. 280 (1826?).
Brepha notha, Curtis, Brit. Ent. Vol. 3, p. 121 (1826).
Brephos parthenias, ab. *passetii*, Thierry-Mieg, Le Naturaliste, Vol. 6, p. 437 (1884) (ab.).

4. *B. infans*, Möschler (præc. var.?). — **Plate, Fig. 13.** — North America.
Brephos parthenias, Möschler, Wien. Ent. Monats. Vol. 4, p. 371 (1860) (nec Linné).
Brephos infans, Möschler, ibidem, Vol. 6, p. 134, t. 1, f. 6 (1862).
Archiearis infans, Grote & Robinson, Trans. Amer. Ent. Soc. Vol. 1, p. 189 (1867).
Brephos hamadryas, Harris, fide Grote & Robinson, ibidem (1867); Ent. Corr. p. 174, t. 1, f. 4 (1869).
Brephos infans et ? var. *hamadryas*, Speyer, Stett. Ent. Zeit. Vol. 36, p. 171, 351 (1875).
Brephos parthenias, var. *infans*, Snellen, Tijdschr. v. Ent Vol. 29, p. 137 (1886).

5. *B. fletcheri*, J. B. Smith, (huj. sect. ?). — British Columbia.
Brephos fletcheri, J. B. Smith, The Canad. Entom. Vol. 39, p. 370 (1907).

NOTE. — Two other species originally erected under *Brephos* have been a source of considerable trouble to our North American entomologists, and their identification has not even yet been thoroughly established. These are *Brephos melanis*, Boisduval, and *Brephos californicus*, Boisduval (*Ann. Soc. Ent. Belg.* Vol. 12, p. 88, 1869), both described from California. It was long ago suspected that they « are probably Arctians and do not belong here » (Grote, *The Canad. Entom.* Vol. 15, p. 56). Smith (ibidem, Vol. 39, p. 369) went a step further and endeavoured to identify them as species of *Leptarctia*. Dyar (ibidem, p. 411) showed that *Brephos californicus* might well be = *Leptarctia californiae*, Walker, and *B. melanis* a dark form

of *L. dimidiata*, Strecker; yet he does not wish the matter to be considered as absolutely closed, since it seems so strange that an entomologist of Boisduval's repute could have described under *Brephos* moths which he elsewhere shows he recognized as *Leptarctia*.

2. Genus LEUCOBREPHOS, Grote

Leucobrephos. Grote, Bull. Buff. Soc. Vol. 2, p. 53 (1874); The Canad. Entom. Vol. 15, p. 55 (1882).

Characters. — Head and palpus, thorax, abdomen and legs clothed with long, shaggy hairs; wing-scales also mingled with long hairs on the underside and at inner margin of hindwing above. Palpus minute or aborted (1). Antenna nearly one-half the length of forewing, in ♂ bipectinate from near base to apex. Legs short. Hindtibia with very minute terminal spurs, medians apparently wanting. Wing-expanse 24-30 mm. Forewing with cell very long, SC^1 free, SC^2 out of stalk of SC^{3-5}, SC^{2-4} coincident, or perhaps sometimes separating close to margin, M^1 connate or short-stalked with R^3; hindwing with cell very long, SC^2 stalked with R^1, R^3 long-stalked with M^1, only separating quite near termen (Plate, Fig. 9).

Type of the genus : *Leucobrephos brephoides* (Walker) = *Anarta brephoides*, Walker (1874).

Geographical distribution of species. — Siberia, Arctic America, British Columbia.

1. *L. brephoides* (Walker). — **Plate, Fig. 14.** — Arctic America to British Columbia, ? Wisconsin.
   - *Anarta brephoides*, Walker, List Lep. Ins. Brit. Mus. Vol. 11, p. 702 (1857).
   - *Archiearis resoluta*, Zeller, Stett. Ent. Zeit. Vol. 24, p. 137, t. 2, f. 1 (1863).
   - *Archiearis brephoides*, Grote & Robinson, Trans. Amer. Ent. Soc. Vol. 1, p. 188 (1867).
   - *Leucobrephos brephoides*, Grote, Bull. Buff. Soc. Vol. 2, p. 53 (1874).
   - *Melicleptria hoyi*, Grote, Bull. Brookl. Ent.Soc. Vol. 3, p. 30 (1880).
   - *Brephos middendorffii*, Möschler. Stett. Ent. Zeit. Vol. 44, p. 117 (1883) (nec Ménétriés).

2. *L. middendorfii* (Ménétriés) (præc. var. ?). — N. E. Siberia.
   - *Amphidasis middendorfii*, Ménétriés, Bull. Phys. Math. Acad. Sc. St-Pétersb. Vol. 17, p. 221 (1858).
   - *Amphidasys middendorffii*, Ménétriés, Schrenck's Reisen in Amur, Vol. 2, p. 66, t. 5, f. 9 (1859).
   - *Brephos middendorfii*, Staudinger, Cat. Lep. (ed. 2), p. 143 (1871).
   - *Leucobrephos middendorfii*, Grote, The Canad. Entom. Vol. 15, p. 55 (1882).

(1) If existent, it is entirely concealed by the dense hairs; we possess no material for closer investigation.

EXPLANATION OF PLATE

Fig. 1. Venation of a Geometrid (*Venodes napiaria*, Guenée). The figures in brackets showing the system of Herrich-Schäffer.

— 1*a*. Humeral angle of hindwing of a Geometrid (*Xanthorhoë montanata*, Schiffermüller), showing the basal angulation of vein C.

— 2. Hindleg of a Geometrid (*Microgonia rufaria*, Warren), showing the hair-pencil expanded.

— 3. Egg of a Geometrid (*Larentia multistrigaria*, Haworth).

— 4. A typical Geometrid larva (*Alcis repandata*, Linné).

— 5. Head of *Brephos notha*, Hübner, showing the oval eye.

— 6. Hindleg of *Brephos notha*, ♂.

— 7. Venation of *Brephos notha*, ♂.

— 8. Venation of *Brephos parthenias*, Linné, ♂.

— 9. Venation of *Leucobrephos brephoides*, Walker, ♂.

— 10. Section of antenna of *Brephos notha*, ♂.

— 11. Section of antenna of *Brephos parthenias*, ♂.

— 12. *Brephos puella*, Esper, ♀.

— 13. *Brephos infans*, Möschler, ♂.

— 14. *Leucobrephos brephoides*, Walker, ♂.

London, N. E., Dalston, February 15, 1910.

LEPIDOPTERA

FAM. GEOMETRIDÆ

SUBFAM. ŒNOCHROMINÆ

LEPIDOPTERA HETEROCERA

FAM. GEOMETRIDÆ

SUBFAM. ŒNOCHROMINÆ

by Louis B. PROUT

WITH I COLOURED AND I PLAIN PLATE

Œnochromidæ. Guenée, Spec. Gén. Lép. Vol. 9, p. 183 (1858).
Mecoceridæ. Guenée, ibidem, p. 387 (1858).
Hedylidæ. Guenée, ibidem, Vol. 10, p. 521 (1858).
Lyrceidæ. Meyrick, Trans. New Zeal. Inst. Vol. 16, p. 56, 94 (1884).
Desmobathridæ. Meyrick, Trans. Ent. Soc. Lond. p. 191, 198 (1886).
Œnochromidæ. Meyrick, Trans. New Zeal. Inst. Vol. 20, p. 60 (1888).
Monocteniadæ. Meyrick, Trans. Ent. Soc. Lond. p. 481 (1889); Proc. Linn. Soc. New South Wales (2), Vol. 4, p. 1136 (1890).
Orthostixidæ. Meyrick, Trans. Ent. Soc. Lond. p. 56 (1892).
Œnochrominæ. Warren, Proc. Zool. Soc. Lond. p. 342 (1893).
Orthostixinæ. Warren, ibidem, p. 343 (1893).
Eumeleinæ. Warren, Novit. Zool. Vol. 1, p. 375 (1894).
Œnochrominæ. Hampson, Fauna India, Moths, Vol. 3, p. 313 (1895).
Orthostixinæ. Hampson, ibidem, p. 318 (1895).
Mecoceratinæ. Hulst, Trans. Amer. Ent. Soc. Vol. 23, p. 384 (1896).

The subfamily *Œnochrominae*, as here understood, is a fusion of a number of small groups, some of them of altogether uncertain location, and not strictly homogeneous, but which are generally accepted as representing the more ancestral forms of the *Geometridae*. Their distinctive features were scarcely recognized prior to the work of Meyrick, but Guenée detected three of the more conspicuous sections as requiring separation, and these seem to be really typical of valid tribes. Meyrick and Hampson made of our *Œnochrominae* two separate families or subfamilies, *Desmobathridae* (= *Orthostixinae*) and

Œnochromidae (= *Monocteniadae*), according to the presence or absence of a connective bar between C and SC of the hindwing; but even if this be a constant specific character, its taxonomic significance is very doubtful, as it appears to sever some otherwise natural alliances : most notably *Orthostixis cribraria*, Hübner, and *O. calcularia*, Lederer, as first pointed out by Snellen, *Tijdschr. v. Ent.* Vol. 38, p. 63. It must therefore in time be abandoned as the mark of a dichotomous separation, but on grounds of convenience it is for the present retained as a rough sectional character, exceptions being noted(1). Little or nothing is yet known of the life histories of many of the genera, and the assemblage of groups which we leave in the tribe *Œnochromicae* might reasonably form several distinct tribes.

The family *Dioptidae,* comprising, besides *Dioptis*, Hübner, such genera as *Josia*, Hübner, is considered by some authorities to be related to the primitive Geometrid stock, and has even been included by Warren among the *Geometridae*, subfamily *Cyllopodinae*. But the newly hatched larvæ are too generalized, and the adult larvæ too differently specialized (having more in common with *Notodontidae*), to allow of their being placed in the family as at present understood, while the position of the basal abdominal cavity (under the pleura of the *first* segment, resembling that of the *Aganaidae* = *Hypsidae*) and the absence of the bend of C of hindwing into the humeral angle fully warrant their exclusion on imaginal characters. The palpus in most Dioptid genera, closely upcurved in front of the face, is also very distinctive, and Bodine (*Trans. Amer. Ent. Soc.* Vol. 23, p. 39) finds their antennæ Notodontid. On the *Dioptidae* in general, and *Phryganidia* in particular, the following may be consulted : Stretch, *Zygaen. N. Amer.* p. 90, t. 10, f. 4, 5; Kellogg & Jack, *Proc. Calif. Acad. Sc.* (2), Vol. 5, p. 562-570, t. 56; Dyar, *Journ. New York Ent. Soc.* Vol. 3, p. 21, Vol. 4, p. 68-72; Packard, ibidem, Vol. 3, p. 30-32; *Ann. New York Acad. Sc.* Vol. 8, p. 89-91; see also Mabilde, *Guia Pract. Coll. Ins.* p. 229, t. 24, f. 8.

Several other genera which have, by one author or another, been treated as Œnochromine are here referred to some different subfamily of the *Geometridae*. *Paleacrita*, Riley, as Pearsall has shown (*The Canad. Entom.* Vol. 39, p. 282), belongs near *Phigalia*, not near *Alsophila*, as was formerly supposed. Dr. Chapman (in litt.) finds it so near *Apocheima hispidaria,* Schiffermüller, that, from his standpoint, the two would be treated as congeneric. *Sebastosema,* Warren, and *Schistophyle*, Warren, also lack R^2 of the hindwing and go to our *Geometrinae;* so too, *Mimaletis*, Warren = *Provola*, Swinhoe (nov. syn.), which was originally placed in the *Orthostixinae*, but has been more correctly located by Swinhoe in the neighbourhood of *Terina*, etc. (Warren's *Braccinae*). *Iotaphora*, Warren, *Œnochlora,* Warren, and *Leucesthes*, Warren (= *Acibdela*, Turner, nov. syn.; type *alba*, Swinhoe = *margarita*, Warren, nov. syn.), fulfil every requirement of *Hemitheinae*, though the narrow wings of the last-named are an exceptional feature. *Xenozancla,* Warren, has already been transferred by Hampson to the same subfamily. *Myrice,* Walker = *Hemigymnodes*, Warren, is apparently related to the evident Acidaliine *Oncopus*, Herrich-Schäffer (= *Neochorista*, Warren, nov. syn.). Hulst's three « *Monocteninae* » (*Haematopis, Paota* and *Synomila*) are also *Acidaliinae,* only with C of hindwing diverging from cell more gradually than usual (see infra). *Mnesampela* is cited by Lower (*Proc. Linn. Soc. N. S. Wales*, Vol. 22, p. 15) under « *Monocteniadae* » evidently by mere oversight. *Aspidoptera navigata,* Lucas, is a synonym of *Anisographe dissimilis,* Warren (sec. specim. typ., teste Turner in litt.). *Arnissa,* Walker, is the Lymantriid *Anthelia* (sec. specim. typ., teste Turner in litt.). A few genera in which R^2 of hindwing is present, but so weak that it may fairly be described as vestigial, are best referred to the *Geometrinae* (= *Boarmiinae*, Hampson); examples are the *Amphidasiicae, Selenia,* Hübner, *Neritodes*, Guenée, *Prometopidia*, Hampson, *Tephronia*, Hübner, *Xenomusa*, Meyrick, *Psilaspilates,* Warren, and others.

(1) A group of genera, chiefly South American, and typified by the genus *Achlora*, Guenée, has sometimes been associated with this bar-carrying section, but has no real connection between C and SC in the hindwing; we therefore make it a separate section (Group II), of the tribe *Œnochromicae*. See infra.

General characters of the Subfamily. — The *Œnochrominae*, as show above, are a heterogeneous assemblage, and there are few characters common to them beyond the general scheme of hindwing venation which has rendered them, provisionally, a grouping of convenience. Thorax and abdomen stoutly built and hirsute in the typical section and a few others, often somewhat suggesting *Lasiocampidae*, etc.; moderate to slender in most of the genera. Wings usually well developed in both sexes, only wanting in the ♀ sex of *Alsophila*, *Inurois* and *Phthorarcha* and somewhat aborted in that of *Egea*. Eye normal, spherical. Antenna often very long; often, again, unipectinate in the ♂, or even (rarely) in both sexes, a peculiarity of extremely rare occurrence outside this subfamily. Legs usually well developed (except in *Hedylicae*), sometimes very long and slender, rarely (*Celerena*) with any abnormal structure; tarsi often strongly spinulose (1). Fovea very rarely present. Both wings with R^2 present, rarely much weaker than the other veins, usually from the middle of the discocellulars, or somewhat nearer to R^1 than to R^3, very exceptionally (*Carteletis*, in part) near to R^3 in forewing, or (*Uliolepis*, *Palaeomystis* ♂, *Alsophila* ♂ in part) near to R^2 in hindwing. Forewing usually with five subcostals, SC^2 occasionally absent (perhaps SC^1 in *Gypsochroa*); SC^1 often free; SC^3 more variable than in the rest of the *Geometridae*, sometimes free (*Hedylicae*), sometimes stalked with SC^2, oftener with SC^{4-5}; usually some anastomosis among the subcostals, and often of SC^1 or SC^{1-2} with C. Hindwing with C free from SC (2), usually approximated thereto for some distance near base, thence gradually diverging; if more remote, then usually connected with SC by a bar near base, perhaps a vestige of SC^1; bend of C into humeral angle in some forms less pronounced than in most of the Geometrid subfamilies, but C and SC scarcely ever subparallel basally; R^2 vestigial only in *Phthorarcha*.

The larvæ have not been much studied, but — as might be expected to occur in the most ancestral subfamily — are known to have in some instances more than the normal Geometrid two pairs of prolegs; thus all the known species of the genus *Alsophila* (the larva of *japonensis* will certainly prove to agree), *Œnochroma vinaria*, *Arhodia lasiocamparia* and perhaps others are recorded to have three pairs, while on the contrary some others of the *Œnochroma* group (*Gastrophora henricaria*, *Phallaria ophiusaria*) have only the customary two pairs, at least in their adult stage (see Anderson, *Vict. Nat.* Vol. 19, p. 59-62).

Only the following tribes seem susceptible of sufficiently sharp definition :

1. *Vein* SC^3 *of forewing arising separately from cell, or from base of stalk of* SC^{4-5} . . . 3. Tribus Hedylicæ.
   Vein SC^3 *of forewing stalked with* SC^4 *to beyond* SC^5, *or* (*more rarely*) *with* SC^2 . . . . . 2.
2. *All five subcostals on a common long stalk either from cell or* (*rarely*) *from a very small areole* . . . . . 2. Tribus Ametridicæ.
   All five subcostals not on a common long stalk (3). . . . . 1. Tribus Œnochromicæ.

1. TRIBUS ŒNOCHROMICÆ

Œnochromidæ. Guenée, Spec. Gén. Lép. Vol. 9, p. 183 (1858).
Monocteniadæ. Meyrick, Trans. Ent. Soc. Lond. p. 481 (1889).

(1) We have usually indicated the normal aspect of the tarsi in relation to the development of spinules, but it should not be over-pressed as differential. They are sometimes so embedded among the scales that a tarsus may be described, from the point of view of its aspect, as « smooth-scaled » or « not spinulose » where in realty the spinules do exist, and in a damaged specimen might be brought into prominence. Whether the tarsi are ever literally without spinules is dubious, and certainly it is as a rule a question of degree or position.

(2) Except in the *Alsophila* and *Hypographa* groups and *Gerusia*, where there occurs a rather strong anastomosis; see also *Afrophyla*.

(3) Occasionnally it may happen (as in certain *Pycnoneura* and *Leptoctenopsis*) that SC^1 arises from close to the base of stalk of SC^{2-5} instead of from cell; but this cannot possibly be confounded with the venation of the *Ametridicae*, in which SC^1 does not separate from the stalk until *after* SC^5. *Afrophyla vethi*, if Snellen's figure is correct (see infra), furnishes an occasional exception to the differentiation here proposed, but its areole is not « very small » and its entire shape and habitus remove it very far from the *Ametridicae*, which, moreover, are exclusively Neotropical.

A large group, showing considerable variation of structure, and without doubt including several distinct tribes (perhaps even equal to « subfamilies ») which are not yet susceptible of definite differentiation. Some of the genera are very isolated, perhaps stranded remnants of some ancient groups. Some, again, Dr. Chapman (in litt.) considers, from the genitalia, to show affinity with *Erannis*.

General characters. — Eye normal, spherical. Face and palpus seldom densely hairy. Antenna moderate or long, sometimes very long, often unipectinate in the ♂, or exceptionally in both sexes. Tongue and frenulum rarely absent. Legs usually moderate or long, hindtarsus without extreme modifications (except in *Celerena*), spurring of hind tibia rarely (*Celerena*, *Paraptychodes* and a few of the *Hypographa* group) varying with the sex. SC^3 of forewing stalked with SC^4 or with SC^2, never free. C of hindwing nearly always approximated to or connected with SC near base, and usually for some distance, sometimes closely appressed, but scarcely ever anastomosed (1). Wings entirely wanting in the ♀ sex of three genera (*Alsophila*, *Inurois* and *Phthorarcha*).

Geographical distribution. — Almost worldwide, but very weakly represented in the Palæarctic Region, and apparently by only a single species (*Alsophila pometaria*) in the Nearctic. Predominantly Australian.

KEY TO THE GENERA

Group I (Œnochrominæ, Hampson). — *Hindwing with* C *closely approximated to* (*occasionally anastomosing with*) SC *for a considerable distance; forewing with* C *often free; hindtibia usually fully spurred, very rarely with terminal spurs only* (*never unarmed, nor with three spurs*); ♂ *antennal structure very variable, often unipectinate;* ♀ *occasionally apterous* . . . . . Genera 1-65.

Group II (Orthostixinæ, part., Hampson). — *Hindwing with* C *well divergent from* SC, *approximated only very shortly near base* (2), *never anastomosing; forewing with* C *never free; hindtibia without median spurs* (Derambila *sub-group = genera 66-71*) *or fully spurred* (Achlora *sub-group = genera 72-86*); ♂ *antennal pectinations, when present, terminating in single bristles;* ♀ *never apterous* . . . . . Genera 66-86.

Group III (Desmobathidæ = Orthostixidæ, Meyrick = Orthostixinæ, part., Hampson). — *Hindwing with* C *well apart from* SC *throughout* (3), *usually connected by a bar near base; forewing with* C *not free* (4); *hindtibia never fully spurred in* ♂, *very seldom* (Celerena, Paraptychodes) *in* ♀, *sometimes unarmed, sometimes with three spurs;* ♂ *antenna variable, pectinations* (*when present*) *not terminating in single bristles;* ♀ *never apterous* . . . . . Genera 87-105.

Group I

1. *Apterous* . . . . . 2.
   Winged . . . . . 4.

(1) In the very few genera in which the appression tends to become anastomosis (see supra), this is virtually always to or at about one-half of the cell (but see *Afrophyla*); some genera which might be regarded as intermediate between this tribe and the *Acidaliinae* (*Cyllopoda*, *Myrice*, *Rytharia*, *Limeria*, *Stigma*, *Haematopis*, *Paota*, *Synomila*, *Palaeaspilates*), but in which the contact is brief and subbasal, are here referred to the latter subfamily. Even *Synomila*, of which Hulst (*Trans. Amer. Ent. Soc.* Vol. 23, p. 295) says « C with cell nearly to middle », cannot be referred to the *Œnochrominae*; the anastomosis is really to scarcely beyond one-third, and the entire build, texture and colouring, besides the unarmed hindtibia, point unmistakably to an *Acidaliine*.

(2) The hindwing venation of this group is for the most part very characteristic, SC being much bent costad near base and thence again divergent, while there is often some thickening of the veins to enhance the approach; see **Pl. 2, Fig. 9, 10**. It is therefore not inconsistent to retain *Corium* here, and a few narrow-winged species of *Derambila*, etc., in which the narrowing of the hindwing has resulted in a longer approximation of C to SC than in the typical, broad winged *Achlora* sub-group. On the other hand one or two genera which might seem intermediate in hindwing venation (such as *Afrophyla*), but which have C of the forewing free, must be sought under Group I.

(3) Except sometimes in *Naxa*, *Centronaxa* and perhaps *Paraptychodes*, but even in these the connective bar usually persists.

(4) Except in *Aletis*, *Cartaletis* and *Paraptychodes*. Aberrant *Acidaliinae*, with the point of contact of C with SC in hindwing making some approach to an extremely short bar, also have C of forewing remote from SC, but can hardly be confused with these.

2. *Hindtibia without median spurs* . . . . . 9. Genus PHTHORARCHA, ♀, Meyrick.
Hindtibia with median spurs . . . . . 3.
3. *Abdomen with anal tuft.* . . . . . 7. Genus ALSOPHILA, ♀, Hübner.
Abdomen without anal tuft (?) (*insufficiently known*) . . 8. Genus INUROIS, ♀, Butler.
4. *Hindtibia without median spurs* 5
Hindtibia with median spurs . . . . . 14.
5. *Hindwing with* C *anastomosing with* SC . . . . . 6.
Hindwing with C *not anastomosing with* SC . . . . . 9.
6. *Build slender; frons smooth* . . . . . 9. Genus PHTHORARCHA, ♂, Meyrick.
Build robust; frons with strong protuberance. . . . . . 7.
7. *Frons without, or with only a single, horny point* . . . 36. Genus OPHIOGRAPHA, ♂, nov. gen., Prout.
Frons with double horny point. . . . . . 8.
8. *Termen of forewing smooth.* . . . . . 37. Genus LISSOCRASPEDA, nov. gen., Prout.
Termen of forewing strongly crenulate. . . . . . 35. Genus DINOPHALUS, nov gen., Prout.
9. *Frenulum absent.* . . . . . 10.
Frenulum present . . . . . 11.
10. *Palpus minute, not hairy,* DC^3 *of both wings extremely oblique.* . . . . . 61. Genus PETOVIA, Walker.
Palpus not minute, hairy, DC^3 *not extremely oblique* . . 62. Genus HELIOTHEA, Boisduval.
11. *Forewing with four subscostals.* . . . . . 65. Genus GYPSOCHROA, Hübner.
Forewing with five subcostals . . . . . 12.
12. *Face with strong conical chitinous projection.* . . . . 33. Genus HOMOSPORA, Turner.
Face without strong conical chitinous projection . . . . . 13.
13. *Large moths,* SC^1 *and* SC^2 *free* . . . . . 34. Genus ARHODIA, Guenée.
Small moths, SC^1 *and* SC^2 *stalked* (1) . . . . . 63. Genus CORTIXA, Schaus.
14. *Hindwing with margin produced to a strong tooth at* SC^2 . . . . . 15.
Hindwing with margin not produced to a strong tooth at SC^2 (2) . . . . . 19.
15. *Forewing with apex extremely produced and acute,* SC^2 *free* 53. Genus DORATOPTERA, Hampson
Forewing not abnormal, SC^2 *not free* . . . . . 16.
16. *Forewing with* SC^{1-2} *anastomosing* . . . . . 17.
Forewing with SC^{1-2} *stalked* . . . . . 18.
17. *Palpus rather short;* SC^2 *of forewing from cell* . . . . 57. Genus XYRIDACMA, Meyrick.
Palpus moderate or rather long; SC^2 *of forewing from stalk of* SC^{3-5} . . . . . 41. Genus CERNIA, Walker.
18. *Palpus short; forewing with* C *free* . . . . . 52. Genus PALÆOMYSTIS, Warren.
Palpus rather long; forewing with C *not free* . . . . 54. Genus LOXORHOMBIA, Warren.
19. *Forewing with* SC^2 *absent.* . . . . . 20.
Forewing with SC^2 *present.* . . . . . 21.
20. *Frenulum absent;* ♂ *antenna ciliated* . . . . . 60. Genus APLASTA, Hübner.
Frenulum present; ♂ *antenna bipectinate* . . . . . 10. Genus EGEA, Duponchel.

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(1) But if Dyar's doubt on the hindleg structure (see supra) is taken into account, this genus will not belong here, but will presumably work out under n° 60 below, being abundantly distinguishable from *Abraxaphantes* and *Systatica* in its far smaller size, etc., etc.

(2) In some genera, notably *Abraxaphantes*, *Samana*, *Theoxena*, *Arcina*, *Epidesmia* (most species), *Dichromodes* (a few species) and *Nearcha* (*curtaria* and *pseudophaes*) the apex is also more or less strongly produced, but not toothed.

21. *Forewing wing* SC^3 *arising out of* SC^2 (1); *thorax and abdomen generally robust, hairy* . . . . . 22.
Forewing with SC^3 *not arising out of* SC^2; *thorax and abdomen seldom robust* . . . . . 38.

22. *Forewing and usually hindwing with* C *not free* . . . . . 23.
Both wings with C *free.* . . . . . 26.

23. *Face strongly protuberant; face, palpus and pectus densely hairy* . . . . . 39. Genus Hypographa (2), Guenée.
Face not strongly protuberant; face, palpus and pectus much less densely hairy . . . . . 24.

24. *Antenna in* ♀ (*and probably in* ♂) *unipectinate* . . . 38. Genus Lissomma, Warren.
Antenna in both sexes bipectinate . . . . . 25.

25. *Forewing with* SC^1 *free from* SC^2; *hindwing with* C *free from* SC . . . . . 43. Genus Onychopsis, Prout.
Forewing with SC^1 *anastomosing with* SC^2; *hindwing with* C *usually anastomosing with* SC . . . . . 45. Genus Gerusia, Warren.

26. *Forewing with* SC^3 *anastomosing with* SC^4 . . . . . 27.
Forewing with SC^3 *not anastomosing with* SC^4 . . . . . 37.

27. *Face with double chitinous projection* . . . . . 2. Genus Diceratucha, Swinhoe.
Face without such projection . . . . . 28.

28. *Abdomen densely tufted with hair beneath* . . . . . 1. Genus Dirce, Prout.
Abdomen not densely tufted beneath . . . . . 29.

29. *Face smooth-scaled, not or but little protuberant; thorax and abdomen not very robust in proportion to wings* (3) . . . . . 30.
Face with projecting scales or hairs, and usually more or less strongly protuberant; thorax and abdomen very robust . . . . . 33.

30. *Wing-expanse considerably under 30 mm.;* ♂ *antenna ciliated* . . . . . 3. Genus Xenogenes, nov. gen., Meyrick.
Wing-expanse considerably over 30 mm.; ♂ *antenna pectinate* . . . . . 31.

31. *Forewing long and narrow;* ♂ *antenna with only one series of pectinations long* . . . . . 29. Genus Antictenia, nov. gen., Prout.
Forewing not long and narrow; ♂ *antenna with both series of pectinations long* . . . . . 32.

32. *Abdomen rather robust; foretibial claw normal* . . . . 44. Genus Circopetes, nov. gen., Prout.
Abdomen slender; foretibial claw with sickle-shaped prolongation . . . . . 42. Genus Onycodes, Guenée.

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(1) For the sake of simplicity, this interpretation is accepted as including all cases which some authors explain by the (perhaps equally tenable) assumption of a « bar » running from SC^2 into SC^4 before the origin of SC^3. See note on *Debos*, and diagnoses of *Carthaea*, *Onycodes*, *Gerusia* and *Naxa*, which show the possibility of a complete separation of SC^3 from SC^4; on the « bar » theory this could only be explained by assuming that SC^3 had migrated and become attached to the bar, hence to SC^2; on the other hand the exceptions to the expected « stalking » of SC^3 with SC^2 in the *Œnochroma* group seem so rare that they can easily be explained as cases of obsolescence of base of SC^3. Such obsolescence of the base of a subcostal vein has been proved by Meyrick to occur in the *Larentiinae* (*Proc. Linn. Soc. N. S. Wales* (2), Vol. 5, p. 825) and we have noted it in *Epirranthis* and *Paraptychodes* and not rarely in our Group II. The cases that concern the application of the present table of genera — *Œnochroma subustaria* and a few others — all fall among the larger, more or less robust and hairy forms which are easily referable by eye (also by strong apical prolongation of cell of forewing) to their right group. The distinction in the point of origin of SC^3 so generally holds that we have ventured to utilize it

(2) Also *Ophiographa* ♀, so far as known; the more produced frons will distinguish this.

(3) Unless in *Antictenia* and *Circopetes*, which belong here on account of flattened face.

33. *Tarsal spinules not very prominent; ♂ antenna very strongly bipectinate; ♀ costa very strongly arched* . . 32. Genus Gastrophora, Guenée.
Tarsal spinules often very prominent; ♂ antenna not or only moderately bipectinate; ♀ costa not strongly arched . . . . . 34.
34. *Hindwing with large, angulated hyaline mark at discocellulars* . . . . . 47. Genus Dicyclodes, Warren.
Hindwing without such mark . . . . . 35.
35. *Palpus with third joint rather long; ♂ antenna bipectinate* 30. Genus Phallaria, Guenée.
Palpus with third joint moderate; ♂ antenna unipectinate. . . . . . 36.
36 *Hindwing with discocellulars strongly inbent,* R^2 *from much above middle* (1) . . . . . 27. Genus Monoctenia, Guenée.
Hindwing with discocellulars usually normal and with R^2 *from about the middle, or little above* . . . . . 28. Genus Œnochroma, Guenée.
37. *Wings small and narrow; face, thorax, etc. smooth-scaled.* 4. Genus Debos, Swinhoe.
Wings large and ample; face, thorax, etc. densely shaggy. 31. Genus Carthæa, Walker.
38. *Hindwing with* C *anastomosing strongly with* SC . . . . . 39.
Hindwing with C *not anastomosing with* SC (2) . . . . . 40.
39. *Forewing with apex usually rounded;* SC^2 *nearly always arising separate* . . . . . 7. Genus Alsophila, ♂, Hübner.
Forewing with apex usually squared or pointed; SC^2 *arising from* SC^{3-5} . . . . . 8. Genus Inurois, ♂, Butler.
40. *Tongue absent; pectus densely hairy* . . . . . 41.
Tongue present; pectus seldom densely hairy . . . . . 42.
41. *Frenulum absent; hindwing with* R^2 *from close to* R^1 . . 49. Genus Thaumatographe, Warren.
Frenulum present; hindwing with R^2 *from nearer to* R^3 *than to* R^1 . . . . . 50. Genus Uliolepis, Warren.
42. *Hindwing with* R^2 *connate with or very close to* R^1 . . 48. Genus Sarcinodes, Guenée.
Hindwing with R^2 *well separated from* R^1 . . . . . 43.
43. *Forewing nearly three times as long as broad.* . . . . 5. Genus Obelopteryx, Warren.
Forewing not nearly three times as long as broad . . . . . 44.
44. *Margins of all wings irregular (deep crenulations or incisions)* . . . . . 45.
Margins of all wings entire . . . . . 46.
45. *Forewing with distal margin excised below apex only* . . . 46. Genus Palæodoxa, Warren.
Forewing with distal margin more or less crenulate or dentate throughout. . . . . . 40. Genus Amphiclasta, Turner.
46. *Antenna and legs abnormally long.* . . . . . 56. Genus Eumelea, Duncan.
Antenna and legs not abnormally long. . . . . . 47.
47. *Hindwing with* C *closely approximated to* SC *to near end of cell* . . . . . 48.
Hindwing with C *diverging from* SC *considerably before end of cell.* . . . . . 52.
48. *Forewing with apex rounded,* SC^{1-2} *stalked.* . . . . 64. Genus Odezia, Boisduval.

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(1) In the few *Œnochroma* species in which R^2 is much above the middle (*postcarneata*, ? etc.), the close approximation of C to SC, and other points noticed under the genera themselves, must be used as differential.

(2) Except rarely (and then not so strongly) in *Afrophyla*.

Forewing with apex squared or acute, SC^{1-2} *anastomosing* . . . . . 49.

49. *Forewing with apex scarcely ever falcate; hindwing with cell short;* ♂ *antenna bipectinate* . . . . . 50.

Forewing with apex more or less falcate; hindwing with cell not short; ♂ *antenna ciliated* . . . . . 51.

50. *Forewing with* C *free* . . . . . 17. Genus Nearcha, Meyrick.

Forewing with C *connected with* SC. . . . . 18. Genus Antasia, Warren.

51. *Palpus long* . . . . . 13. Genus Samana, Walker.

Palpus moderate. . . . . 12. Genus Theoxena, Meyrick.

52. *Forewing with* C *free* . . . . . 53.

Forewing with C *not free* . . . . . 62.

53. *Face very strongly protuberant* . . . . . 16. Genus Arcina, Walker.

Face not very strongly protuberant. . . . . 54.

54. *Forewing with* SC^2 *arising independently from cell*. . . . . 55.

Forewing with SC^2 *not arising independently from cell*. . . . . 58.

55. *Forewing with* SC^2 *anastomosing strongly with* SC^1 . . . . . 56.

Forewing with SC^2 *very rarely anastomosing (never strongly) with* SC^1 . . . . . 57.

56. *Palpus long or very long* (1); ♂ *antenna unipectinate* . . 23. Genus Epidesmia, Westwood.

Palpus moderate (1); ♂ *antenna ciliated*. . . . . 22. Genus Taxeotis, sect. II, Meyrick.

57. *Hindtibia of* ♂ *with hair-pencil;* ♂ *antenna bipectinate* . 14. Genus Adeixis, Warren.

Hindtibia of ♂ *usually without hair-pencil;* ♂ *antenna unipectinate* . . . . . 15. Genus Dichromodes, Guenée.

58. *Forewing without an areole*. . . . . 59.

Forewing with an areole . . . . . 61.

59. *Forewing with* SC^2 *stalked with* SC^{3-5} . . . . . 6. Genus Marcodava, Walker.

Forewing with SC^2 *stalked with* SC^1 . . . . . 60.

60. *Hindwing produced at* SC^2*; frenulum aborted* . . . . 51. Genus Abraxaphantes, Warren.

Hindwing not produced at SC^2*; frenulum not aborted* . . 26. Genus Systatica, Turner.

61. *Palpus rather short; apex of forewing acute* . . . . . 25. Genus Afrophyla, Warren.

Palpus rather long; apex of forewing not acute. . . . 24. Genus Satraparchis, Meyrick.

62. *Palpus short* . . . . . 63.

Palpus moderate or long . . . . . 64.

63. *Hindwing with distal margin smooth;* ♂ *hindtibia without hair-pencil* . . . . . 59. Genus Epirranthis, Hübner.

Hindwing with distal margin more or less dentate; ♂ *hindtibia with hair-pencil* . . . . . 58. Genus Xynonia, Prout.

64. *Forewing with* $SC^{1\,2}$ *stalked* . . . . . 65.

Forewing with SC^{1-2} *not stalked* . . . . . 66.

65. *Palpus with third joint strong, distinct;* ♂ *antenna unipectinate* . . . . . 55. Genus Heteralex, Warren.

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(1) In the very rare cases in which the palpus of *Taxeotis* could at all be described as « long » (e. g., *stereospila*) the generic location may be made dependent on the ♂ antenna, at least provisionally. But no known species of *Taxeotis* bears any comparison in the palpus to normal *Epidesmia*, while the rounded distal margin of the hindwing in the former genus is usually noticeable, that of *Epidesmia* being so generally comparatively straight, with produced apex. In the many *Taxeotis* species in which C is not free (our Section I, embracing probably twenty-four of the thirty-one known species) no dificulty can arise.

Palpus with third joint small, concealed; ♂ antenna bipectinate . . . . . 20. Genus ZEUCTOPHLEBIA, Warren.
66. *Forewing with* SC^2 *stalked with* SC^{3-5} . . . . . 19. Genus ENCRYPHIA, Turner.
Forewing with SC^2 *not stalked with* SC^{3-5} . . . . . 67.
67. *Wings exceptionally glossy; hindwing with* SC^2 *and* R^1 *stalked* . . . . . 11. Genus MYINODES, Meyrick.
Wings not exceptionally glossy; hindwing with SC^2 *and* R^1 *not stalked* . . . . . 68.
68. *Wings delicate, costa of forewing strongly arched, ♂ antenna bipectinate* . . . . . 21. Genus TAPINOGYNA, nov. gen., Prout.
Wings normal, costa of forewing little arched, ♂ antenna ciliated . . . . . 22. Genus TAXEOTIS, sect. I, Meyrick.

Group II

1. *Hindtibia with terminal spurs only, or unarmed* . . . . . 2.
Hindtibia with median and terminal spurs . . . . . 7.
2. *Forewing with only ten veins that reach the margins* . . . . . 3.
Forewing with more than ten veins that reach the margins . . . . . 5.
3. *Hindwing in ♂ with costa distorted* (1) . . . . . 69. Genus HOLOSTIXA, Swinhoe.
Hindwing in ♂ with costa not distorted . . . . . 4.
4. *Wings iridescent; ♂ hindtibia with hair-pencil* . . . . 66. Genus DERAMBILA, Walker.
Wings not iridescent; ♂ hindtibia without hair-pencil . . 68. Genus BARRAMA, Warren.
5. *Forewing with* SC^1 *arising from* SC^{3-5}; *♂ antennal ciliation minute* . . . . . 67. Genus CORIUM, nov. gen., Prout.
Forewing with SC^1 *arising from* C; *♂ antennal ciliation long* . . . . . 6.
6. *Palpus long; hindwing of ♂ with lappet at inner margin* . 71. Genus ZANCLORHACOS, Bastelberger.
Palpus usually moderate; hindwing of ♂ without lappet at inner margin . . . . . 70. Genus ZANCLOPTERYX, Herrich-Schäffer.
7. *Forewing with* SC^1 *arising from* C . . . . . 8.
Forewing with SC^1 *not arising from* C . . . . . 9.
8. *Forewing with* SC^2 *from cell; ♂ antenna ciliated* . . . 76. Genus ENTOGONIA, Warren.
Forewing with SC^2 *stalked with* SC^1; *♂ antenna bipectinate* . . . . . 86. Genus APATADELPHA, nov. gen., Prout.
9. *Forewing with* SC^2 *anastomosing with* SC^{3-4} . . . . . 10.
Forewing with SC^2 *not anastomosing with* SC^{3-4} . . . . . 20.
10. *Hindwing with cell very short; palpus not long* . . . . . 11.
Hindwing with cell not very short; palpus sometimes long (2) . . . . . 12.
11. *Forewing with distal margin usually concave; hindwing of ♂ with medians curved* . . . . . 75. Genus PYCNONEURA, Warren.
Forewing with distal margin not concave, usually convex; hindwing of ♂ with medians normal . . . . . 74. Genus DOLICHONEURA, Warren.

(1) The ♀ is scarcely yet differentiated from those of certain *Derambila* species; pectus apparently more hairy.

(2) In *Achlora*, where the cell of the hindwing might be judged « very short », at least if *Pycnoneura* and *Dolichoneura* were not at hand for comparison, the pectinate ♂ antenna and the long palpus, especially of the ♀, are sufficiently distinctive.

12. *Groundcolour white* . . . . . 13.
Groundcolour not white . . . . . 14.
13. *Palpus moderate; apex produced; ♂ antenna bipectinate* . 73. Genus Dolerophyle, Warren.
Palpus short; apex scarcely produced; ♂ antenna ciliated. 72. Genus Racasta, Walker.
14. *Forewing of ♂ with fovea* . . . . . 15.
Forewing of ♂ without fovea . . . . . 16.
15. *Antenna in ♂ bipectinate* . . . . . 81. Genus Physetostege, Warren.
Antenna in ♂ ciliated . . . . . 80. Genus Callipotnia, Warren.
16. *Palpus long* . . . . . 17.
Palpus moderate or rather short . . . . . 18.
17. *Hindwing with inner margin longer than costal* . . . . 78. Genus Achlora, Guenée.
Hindwing with inner margin not longer than costal. . . . 85. Genus Panagropsis, Warren.
18. *Hindwing with inner margin considerably longer than costal, in ♂ not tufted beneath; face somewhat protuberant.* . 84. Genus Brachytrita, Swinhoe.
Hindwing with inner margin scarcely or not longer than costal, in ♂ often tufted beneath; face scarcely protuberant . . . . . 19.
19. *Forewing with apex not produced or falcate; hindwing of ♂ often tufted beneath* . . . . . 79. Genus Noreia, Walker.
Forewing with apex usually produced or falcate; hindwing of ♂ never tufted beneath . . . . . 77. Genus Leptoctenopsis (1), Warren.
20. *Antenna in ♂ bipectinate; ♂ hindwing with* R^{1-2} *connate or stalked; ♀ palpus with third joint extremely long, smooth.* . . . . . 82. Genus Alex, Walker.
Antenna in ♂ ciliated; ♂ hindwing with R^2 *normal; ♀ palpus with third joint less extreme, rougher-scaled* . 83. Genus Geoglada, Swinhoe.

Group III

1. *Forewing with* SC^2 *absent* . . . . . 2.
Forewing with SC^2 *present.* . . . . . 3.
2. *Hindtibia with terminal spurs only* . . . . . 92. Genus Derxena, Walker.
Hindtibia with one median spur . . . . . 91. Genus Ozola, Walker.
3. *Forewing with* C *free* . . . . . 4.
Forewing with C *not free* . . . . . 6.
4. *Forewing with double areole* . . . . . 95. Genus Cartaletis, Warren.
Forewing without double areole. . . . . . 5.
5. *Forewing with* SC^1 *free; ♀ hindtibia with median spurs* . 96. Genus Paraptychodes, Warren.
Forewing with SC^1 *not free; hindtibia in both sexes without median spurs* . . . . . 94. Genus Aletis, Hübner.
6. *Forewing with* SC^1 *arising out of* C . . . . . 7.
Forewing with SC^1 *not arising out of* C . . . . . 9.
7. *Frenulum absent; hindtibia without spurs* . . . . . 88. Genus Naxa, Walker.
Frenulum present; hindtibia with terminal spurs . . . . . 8.

(1) See ote on this genus, infra.

8. *Antenna in both sexes bipectinate* . . . . . 89. Genus Centronaxa, nov. gen., Prout.
Antenna in both sexes ciliated . . . . . 87. Genus Orthostixis, Hübner.
9. *Hindtibia without median spurs* . . . . . 90. Genus Aspilonaxa, Warren.
Hindtibia with median spurs . . . . . 93. Genus Celerena, Walker.

Group I

1. Genus DIRCE, Prout

Dirce. Prout, Wytsman, Gen. Ins. Fasc. 103, p. 12 (1910).
Œnone. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1194 (1890) (nec Savigny, 1817).

Characters. — Face clothed with long hairs. Palpus moderate, densely clothed with long hairs below. Tongue present. Antenna moderately long, pubescent in both sexes. Thorax with fine erect hairs above, densely hairy beneath. Femora hairy. Hindtibia with all spurs. Tarsi moderately spinulose. Abdomen rather robust, densely hairy beneath. Wing-expanse 21-25 mm. Wings thickly scaled, entire, fringes rather long. Frenulum present. Forewing with costa strongly shouldered at base, thence nearly straight, apex not acute, distal margin gently convex, cell rather long and narrow, C well removed from it, SC^1 from about two-thirds, SC^{2-3} stalked from before SC^{4-5}, SC^3 anastomosing shortly with SC^4, radials normal, M^1 separate from R^3, DC^4 almost perpendicular; hindwing with inner margin not long, distal margin little convex, cell long and narrow, C more or less approximated to SC throughout cell, especially at middle part, SC^2 connate or short-stalked with R^1, R^2 weak, M^1 separate from R^3, inner area of wing ample, M being nearly in middle of wing and SM^3 running to anal angle.

Early stages unknown.

It is not impossible that further research may result in transferring this genus (possibly also the following?) to the *Brephinae*. The eyes, though spherical, are neither large nor prominent; the hairy face and palpus, and even the wing coloration are highly suggestive of that subfamily.

Type of the genus : *Dirce lunaris* (Meyrick) = *Œnone lunaris*, Meyrick.

Geographical distribution of species. — Australian.

1. *D. lunaris* (Meyrick). Tasmania.
Œnone lunaris, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1195 (1890).
2. *D. solaris* (Meyrick). Tasmania.
Œnone solaris, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1195 (1890).

2. Genus DICERATUCHA, Swinhoe

Diceratucha. Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 14, p. 133 (1904).

Characters. — Face somewhat hairy; two bluntly conical, chitinous frontal projections above. Palpus moderate, with projecting scales. Tongue present. Antenna about one-half, in ♂ shortly ciliated,

in ♀ subserrate, pubescent. Thorax somewhat hairy. Hindtibia in ♂ with slight hair-pencil, in both sexes with all spurs. Tarsi scarcely spinulose. Wing-expanse 25-28 mm. Frenulum present. Forewing with cell rather long and narrow, SC^1 free, SC^{2-3} stalked from well before SC^{4-5}, SC^3 anastomising shortly with SC^4 from just beyond SC^5, radials normal, M^1 approximated at its base to R^3, M^2 from rather near end of cell; hindwing with C not sharply bent basally, closely approximated to SC to beyond two-thirds of cell, thence gradually diverging, SC^2 long-stalked with R^1, discocellulars very oblique, slightly inangled, R^2 from the angle, rather weak, M^1 separate from R^3, inner area of the wing rather broad, SM^3 running to anal angle.

♂ genitalia with uncus pointed, two elbowed arms project from the tegumen, constituting possibly a trifurcate uncus; harpes rather narrow, parallel, spined at apex, a small tooth projecting inwardly from apex of sacculus; penis very short and stout. Form of uncus and harpes remind of the *Polyplocidae*.

Early stages unknown.

The diagnosis of this genus was drawn up quite independently of the preceding, but the two are closely similar in venation. They are probably rather ancient types, with comparatively little of the Geometrid specialization. Their superficial appearance is, in a few characters, somewhat Noctuid, *Diceratucha* even showing the so-called « Noctua pattern ».

Type of the genus : *Diceratucha xenopis* (Lower) = *Œnone xenopis*, Lower = *Diceratucha xenopis*, Swinhoe (1904).

Geographical distribution of species. — Australian.

1. *D. xenopis* (Lower). — **Pl. 1, Fig. 19.** Victoria.

Œnone xenopis, Lower, Trans. Roy. Soc. S. Austral. Vol. 26, p. 227 (1902).
Diceratucha xenopis, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 14, p. 133 (1904).

3. Genus XENOGENES, nov. gen., Meyrick

Xenogenes. Meyrick, in litt. (1).

Characters. — « Face rounded-prominent, with appressed scales. Tongue developed. Antennæ three-fifths, in ♂ flatly dentate, moderately ciliated. Palpi moderate, subascendig, second joint with dense rather rough scales, terminal joint short. Thorax and femora beneath with a few hairs, posterior tibiæ with all spurs. Forewings with 10 connected with 9 (2), forming a short areole, 11 separate. Hindwings with 3 and 4 approximated at base, 5 normal, 6 and 7 short-stalked, transverse vein rather bent, 8 approximated to cell towards base, diverging from before middle of cell. » (Meyrick, in litt.).

Early stages unknown.

Type of the genus : *Xenogenes chrysoplaca*, Meyrick.

Geographical distribution of species. — Australian.

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(1) The entire descriptions of this anomalous-looking genus and species have been kindly furnished by Mr. Edward Meyrick.

(2) SC^3 out of SC^2, anastomosing with SC^4, on our interpretation and nomenclature; 11 = SC^1, 3 of hindwing = M^1, 4, 5, 6 = R^3, R^2 and R^1, 7 = SC^2, 8 = C. — L. B. P.

1. **X. chrysoplaca, nov. sp.** (1), Meyrick, in litt. Queensland.
2. **X.** (?) **eustrotiodes, nov. sp.** (2), Prout. West Australia.

4. Genus DEBOS, Swinhoe

Debos. Swinhoe, Proc. Zool. Soc. Lond. p. 291 (1885); Ann. Mag. Nat. Hist. (7), Vol. 17, 553 (1906).

Characters. — Face with appressed scales. Palpus moderate, slender, slightly rough-scaled, third joint small, pointed. Tongue wanting. Antenna about one-half length of forewing, in ♂ strongly unipectinate (♀ unknown). Thorax glabrous beneath. Legs rather short and stout. Femora glabrous. Hindtibia not dilated, all spurs present. Abdomen moderately stout. Wing-expanse 21-22 mm. Wings long and narrow, smooth-scaled. Frenulum developed. Forewing with costa slightly arched at base, apex hardly acute, distal margin slightly oblique, cell two-thirds the length of wing, SC^1 free, SC^{2-3} on a rather long stalk quite apart from SC^{4-5}, SC^{4-5} stalked from close to R^1, radials normal, M^1 from close to end of cell; hindwing with C approximated to SC to about one-half, thence gradually diverging, SC^2 stalked with R^1, R^2 weak, from middle of discocellulars, M^1 connate with R^3.

Early stages unknown.

An apparently quite isolated genus, whose position has given much trouble to systematists, and which may perhaps not ultimately be allowed to remain in the *Geometridae*. The separation of vein SC^3 from SC^4 is very rare for this family, and antagonistic to Meyrick's characterization thereof; yet it has been noticed in the genera *Carthaea*, *Gerusia*, etc. (see supra, « Key », 21, footnote) and might easily appear in others of the same group, where SC^3 arises from SC^2, but normally anastomoses with SC^4.

Type of the genus : *Debos iratus*, Swinhoe (1885).

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(1) « **Xenogenes chrysoplaca, nov. sp.** — ♂ 24 mm. Head ochreous-yellow, back of crown and a frontal bar dark fuscous. Palpi dark fuscous, mixed with yellowish beneath. Antennæ dark fuscous. Thorax dark fuscous, a spot on shoulders and two connected posterior spots ochreous-yellow. Abdomen orange, basal and three anteapical segments suffused dorsally with dark fuscous. Forewings somewhat elongate-triangular, costa nearly straight, apex obtuse, termen gently rounded, rather oblique; blackish-fuscous, markings rather light ochreous-yellow; a slender costal streak from base to five-sixths; an elongate-triangular blotch almost resting on dorsum about one-fourth and reaching to beneath costa at two-fifths; a moderate fascia from beneath costa at three-fifths to dorsum at three fourths; a narrow fascia along lower two-thirds of termen, attenuated downwards; cilia blackish-fuscous. Hindwings with termen rounded; blackish-fuscous; an orange patch occupying basal half of wing, anterior edge irregularly rounded and nearly parallel to termen; a narrow orange subterminal fascia on lower two-thirds, extremities attenuated; cilia blackish fuscous. Duaringa, Queensland, in May (G. Barnard); one specimen ». (Meyrick, in litt.). Type in coll. E. Meyrick.

(2) **Xenogenes** (?) **eustrotiodes, nov. sp.** — 15 mm. (♀), 19 mm. (♂). Face orange-yellow above, narrowly white below, vertex varied with fuscous and orange; palpus fuscous, terminally bright orange; antenna fuscous. Thorax dorsally white, blotched with fuscous; abdomen dorsally concolorous with hindwing, ventrally fuscous. Wings densely but smoothly scaled, somewhat glossy, recalling the texture of the Noctuid genera *Eustrotia* (*Erastria*) and others; fringes long. Forewing white, faintly tinged with yellowish; costa broadly but irregularly blotched with brown from base to near first line; lines velvety black, first from before one-third of costa to beyond two-fifths of inner margin, oblique outwards from costa, forming a slight tooth distad in upper and a deep sinus distad in lower half of cell, broken except at its ends into a series of vein-spots (that on M^1 elongate), running from two-thirds of costa to before two-thirds of inner margin, starting from a thick black spot on costa, thence oblique outwards to SC^5, nearly vertical to R^3, strongly curved inwards to submedian fold, where it is somewhat angled, thence again curved inwards to inner margin; first line followed by an irregular plumbeous median band (in the ♀ brown and more regular) of about 2 mm. width, and this again by a straight streak along discocellulars; a further plumbeous (in ♀ brown) cloud proximally to second line behind cell, darker blotches from costa before apex and from inner margin before tornus, the former terminating in a small blackish blotch across R^5, the latter meeting the median band about at M^2; subterminal line of the ground-colour, strongly dentate, indistinct and slightly filled in distally with plumbeous shading in the ♂, more distinct in the ♀, which has the entire distal margin darkened; a terminal line of distinct elongate black marks, the anterior one thickened; fringe whitish, indistinctly dark-spotted, and with a distinct blackish mark at apex. Hindwing with distal margin little rounded, especially between SC^2 and M^1, apex therefore slightly produced, but not acute; ground colour very pale yellowish (in the ♀ yellower), with a terminal brown band of about 1 1/2 mm. width, which, in the type (♂) is indistinct, divided by a pale yellowish line and interrupted before anal angle, and with a dark mark on inner-margin at beyond one-half; terminal spots and fringe nearly as in forewing. Underside of forewing fuscous, with two pale marks on costa; underside of hindwing somewhat as upperside, but with a distinct dark discal spot, distinct traces of a curved postmedial line, and (in the type) the terminal dark band even more reduced, three blotches (that at costal extremity very small) alone persisting. Waroona, West Australia, G. F. Berthoud. Type (♂) 16 Nov. 1907, and co-type (♀) 23 Nov. 1907, in coll. G. Lyell. Referred provisionally to *Xenogenes*, as it seems undesirable to erect a new genus without being able to compare it with the existing one. It agrees with the essential characters given by Meyrick, only the palpus is rather short, porrect, and vein C of hindwing is closely approximated to cell to far beyond one-half, and probably a side-by-side comparison would reveal differences in texture or scaling, and in shape of hindwing. ♂ hindtibia thickened, with hair-pencil. Forewing with SC^3 out of SC^2, anastomosing with SC^4 close beyond SC^5. Evidently a rather variable species (sexually ?), Mr. Lyell's ♀ being smaller and altogether darker than the ♂, see above; the ♂ has also some scattered black dots in the white subbasal area, the ♀ only one (on submedian fold).

Geographical distribution of species. — Indian.

1. *D. iratus*, Swinhoe. Nilgiris.
Debos iratus, Swinhoe, Proc. Zool. Soc. Lond. p. 291, t. 20, f. 7 (1885).

5. Genus OBELOPTERYX, Warren

Obelopteryx. Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 407 (1906).

Characters. — Face gently convex, not projecting beyond the eyes, terminating in a slight ridge at the mouth. Palpus small, slender, upcurved, smooth-scaled, terminal joint obtusely pointed. Tongue developed. Antenna in ♀ pubescent, the segments slightly angled (♂ unknown). Legs moderate, slender, hindtibia with two pairs of equal spurs. Wings-expanse 28 mm. Frenulum present. Forewing nearly three times as long as broad, cell rather narrow, discocellulars slightly incurved, SC^2 from just before stalk of SC^{3-5}, anastomosing first with SC^1 and then with SC^{3-4}, forming a double areole, radials normal, M^1 from close to R^3, M^2 not far from M^1; hindwing rather small, narrow, rounded distally, inner margin short, C approximated to SC to one-half, SC^2 stalked with R^1, R^2 very weak, medians much as in forewing, SM^3 to anal angle.

Early stages unknown.

Only the type-specimen of this anomalous genus is at present known. Dr. Dyar, who has kindly supplied some information supplemental to that originally published, writes that in shape and colour the insect looks suggestive of a *Eupithecia*. Warren thinks it shows some analogy to *Erannis* (= *Hibernia*, auctt.), but does not say in what respects. The forewing venation is distinctly Larentiine, while in the hindwing (as in one or two other aberrant genera of this subfamily : *Debos*, etc.), R^2 is so weak as to suggest a transition to that in which it is absent (*Geometrinae* [= *Boarmiinae*, auctt.]).

Type of the genus : *Obelopteryx angusta*, Warren (1906).

Geographical distribution of species. — Peru.

1. *O. angusta*, Warren. Peru.
Obelopteryx angusta, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 408 (1906).

6. Genus MARCODAVA, Walker

Marcodava. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1744 (1862).

Characters. — Face scarcely protuberant, with appressed scales. Palpus moderate, hairy, third joint not distinct. Tongue long. Antenna in ♂ about two-thirds, slender, bipectinate to apex, the pectinations moderately long, finely ciliated. Thorax slender, slightly hairy beneath. Legs (broken). Abdomen slender. Wing-expanse 28 mm. Wings smoothly scaled. Frenulum present. Forewing rather narrow, costa well arched at base, thence nearly straight, slightly convex before apex, distal margin oblique, about half the length of costal, cell more than half the length of wing, DC^3 very oblique, SC^1 free, SC^2 stalked with SC^{3-5} from close to apex of cell, R^2 from slightly nearer to R^1 than to R^3, M^1 very short-stalked with R^3, M^2 from about two-thirds of cell; hindwing slightly produced, but apex rounded, distal margin little convex, cell about one-half, DC^3 very oblique, C closely appressed to SC to just beyond one-half of cell, thence diverging, SC^2 short-stalked with R^1, R^2 from near upper angle of cell, M^1 short-stalked with R^3.

Early stages unknown.

A rather curious genus, which except for its shape, coloration and general aspect, might be referred to the *Hemitheinae*. Its position is very obscure, and it is certainly quite remote from the other South American representatives of the *Œnochromicae*, all of which, with the exception of *Obelopteryx* and *Cortixa*, fall into our Group II. In the scaling, it slightly suggests *Alsophila*, but in most other respects it is altogether dissimilar. Only the original type, collected by Darwin at Port Famine, is known.

We find a rather close relationship between this genus and « *Bacillogaster* » *parva*, Butler, *Trans. Ent. Soc. Lond.* p. 392 (1882), from Chili, with which we were unacquainted when arranging our material. Perhaps it would have been better reserved for treatment under the subfamily *Geometrinae*, vein R^2 of the hindwing being quite weak. The same remark applies to *Egea* and possibly some others of these transitional genera.

Type of the genus : *Marcodava egenaria*, Walker.

Geographical distribution of species. — Patagonia.

1. *M. egenaria*, Walker. Patagonia.
Marcodava egenaria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1745 (1862).

7. Genus ALSOPHILA, Hübner

Alsophila. Hübner, Verz. bek. Schmett. p. 320 (1826?); Herrich-Schäffer, Deutsch. Ins. Heft 165, p. 28, Heft 166, p. 84 (1839).

Anisopteryx. Boisduval, Gen. Ind. Meth. p. 193 (1840) (ex Stephens, Ill. Haust. nec sect. typ. Westwood restr.)

Anysopteryx. Duponchel, Cat. Méth. Lép. p. 235 (1845).

Erannis. Meyrick, Trans. Ent. Soc. Lond. p. 81 (1892) (ex Hübner, Verz. nec sect. typ. Herrich-Schäffer restr.).

Characters. — Face with appressed scales. Palpus extremely short, rough-scaled, third joint smooth, slender. Antenna in ♂ less than one-half the length of forewing, subdentate, with long or moderately long fasciculate ciliation, in ♀ almost simple. Thorax somewhat hairy beneath. Femora glabrous. Hindtibia not dilated, all spurs present (though very small in ♀). Tarsi strongly spinulose. Wing-expanse of ♂ 31-40 mm. Wings smooth-scaled. Frenulum present. Forewing with costa nearly straight or slightly arched, apex rounded, distal margin oblique, cell very long, SC^1 generally free, occasionally anastomosing slightly with C, SC^2 arising from cell (occasionally in *pometaria* from SC^1), generally free, occasionally (at least in *pometaria*) anastomosing shortly with stalk of $SC^{3\text{-}5}$, $SC^{3\,5}$ long-stalked from just before or (in *aceraria*) from apex of cell, R^1 normal or (in *aceraria*) very short-stalked with $SC^{3\text{-}5}$, M^1 separate from R^3, SM^3 obsolete or short, not running into SM^2; hindwing ample, rounded, cell long, discocellulars biangulate in the typical section, R^2 then from lower angle, near (sometimes very close) to R^3, C anastomosing strongly with SC, SC^3 separate, connate, or very short-stalked with R^1, R^2 variable in position, M^1 separate from R^3, SM^2 running into distal margin, SM^3 to anal angle (**Pl. 2, Fig. 1**), ♀ apterous, with strong anal tuft. ♂ genitalia with uncus pointed, obtuse, harpes broad, truncate, bearing on the upper (i. e., ventral) edge one long, parallel process at the apex and one or more obtuse extensions below, penis not longer than the genitalia, pointed.

Egg. — Oblong, somewhat squared by being squeezed together in patches, firmly cemented (sometimes encircling a twig, like those of *Malacosoma neustria*), laid upright (i. e., the sides attached to neighbouring eggs instead of to a flat surface as with most Geometrids), micropylar end convex, nadir

more flattened, surface smooth and glossy, a covering of long, fibre-like scales from the maternal anal tuft (Hellins, *Ent. M. Mag.* Vol. 14, p. 114). But Eyndhoven's figures in Sepp (*Ned. Ins.* Vol. 8, t. 34, f. 1-3) and the American accounts (Riley, *Eighth Rep. Ins. Mo.* p. 13; Dyar, *Psyche*, Vol. 9, p. 262, etc.) deviate in some details. The manner of oviposition has been described by Lyonet, *Recherches*, p. 281, 282.

Larva. — Slender, smooth, uniformly cylindrical, head nearly round, somewhat flattened, slightly bilobed, under the anal flap two short, blunt points, on fifth abdominal segment an additional pair of rudimentary prolegs, not noticeable in the newly hatched larva (Hellins, Riley, Dyar, in locis citatis). According to Breyer (*Ann. Soc. Ent. Belg.* Vol. 7, p. 45) these additional prolegs are retractile, and are used, in walking, not for prehension but as tactile organs to find a suitable foothold for the true claspers.

Pupa. — Very plump and full, eye-cases prominent, abdomen tapering rapidly but with anal extremity blunt, bearing a flat knob with two short, widely-diverging sharp spines (Hellins, loc. cit.; Riley, loc. cit. f. 6; Sepp, *Ned. Ins.* Vol. 8, p. 129, t. 34, f. 8, 9).

Probably a somewhat ancestral type of genus, yet with certain specializations of its own. The strong anastomosis of C of hindwing with SC has led some systematists to place it (as also the following genus) among the *Larentiinae*. The early stages, the posture of the ♂ moth at rest (with the hindwing closely folded, and covered by the forewing), the scaling and pose of markings, the venation of the forewing (with SC^1 usually entirely free from SC^2, and occasionally anastomosing with C), the position of SM^3 of the hindwing, and a possible relationship to *Egea* (in whose hindwing there is no anastomosis or connection of C with SC), satisfy us that there is no real Larentiine affinity. The venation is in a singular state of flux; not only are the discocellulars of the hindwing different in different species (whereas in the *Larentiinae* their constancy is even of *generic* value), but in *aescularia* there is actually some appreciable variability among individual specimens, while its Japanese counterpart, *japonensis* falls, on this character, into a separate section; further variability will be found in the subcostals of the forewing, see supra.

Type of the genus : *Anisopteryx aescularia* (Schiffermüller) = [*Phalaena*] *Geometra aescularia*, Schiffermüller (1839).

Geographical distribution of species. — Palæarctic and Nearctic.

Section I. — Hindwing with discocellulars biangulate, R^2 from near R^3.

1. *A. aescularia* (Schiffermüller). Europe to Armenia.

[*Phalaena*] *Geometra aescularia* [Schiffermüller], Schmett. Wien. p. 102 (1775).
Phalaena Geometra murinaria, Borkhausen, Eur. Schmett Vol. 5, p. 210 (1794) (nec Schiffermüller, 1775).
Geometra cineraria [Haworth], Prodr. Lep. Brit. p. 23 (1802), nom. nud. (fide Haworth, Lep. Brit. (2), p. 306 (1809).
Geometra apteraria, ♀, Haworth, Lep. Brit. (2), p. 306 (1809).
Fidonia aescularia, Treitschke, Schmett. Eur. Vol. 5 (2), p. 437 (1825).
Alsophila aescularia, Hübner, Verz. bek. Schmett. p. 321 (1826 ?).
Fidonia progemmaria, ♀, Treitschke, Schmett. Eur. Vol. 6 (1), p. 314 (1827) (nec Hübner)
Anisopteryx aescularia, Stephens, Cat. Brit. Ins. Vol. 2, p. 116 (1829).
Hibernia aescularia, Duponchel, Lép. de France, Vol. 7 (2), p. 318 (1829).
Hibernia aesculi, Duponchel, ibidem, t 156, f. 3 (1829).
Chimadia aescularia, Speyer, Isis, p. 109 (1839).
Erannis aescularia, Meyrick, Trans. Ent. Soc. Lond. p. 81 (1892).

2. *Anisopteryx quadripunctaria* (Esper). Europe to Armenia.

[*Phalaena*] *Geometra aceraria* [Schiffermüller], Schmett. Wien, p. 102 (1775) (nec Hufnagel, 1767).

Geometra accraria, Hübner, Samml. Eur. Schmett. Geom. t. 35, f. 186 (1796) (in err. pro *aceraria*).
Phalaena Geometra quadripunctaria, ♂, Esper, Schmett. in Abbild. Vol. 5, p. 205, t. 36, f. 10 (1800) (nec f. 11, ♀).
Fidonia aceraria, Treitschke, Schmett. Eur. Vol. 5 (2), p. 436 (1825).
Erannis aceraria, Hübner, Verz. bek. Schmett. p. 320 (1826?).
Hibernia aceraria, Duponchel, Lép. de France, Vol. 7 (2), p. 316 (1829).
Hibernia aceris, Duponchel, ibidem, t. 156, f. 1, 2 (1829)
Alsophila aceraria, Herrich-Schäffer, Deutsch. Ins. Heft 166, p. 84 (1839).
Chimadia aceraria, Speyer, Isis, p. 109 (1839).
Anisopteryx aceraria, Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 106 (1848).

SECTION II. — Hindwing with discocellulars simple, R^2 from near the centre.

3. *A. japonensis* (Warren). — Japan and S. E. Siberia.
Anisopteryx japonensis, Warren, Novit. Zool. Vol. 1, p. 374 (1894).
Anisopteryx primigena, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 90 (1897) (nec Staudinger).
Anisopteryx aescularia, var. *japonensis*, Staudinger, Cat. Lep. (ed. 3), p. 334 (1901).

4. *A. pometaria* (Harris). — Temperate North America.
[*Anisopteryx*] *vernata* (part.), Harris, Rep. Ins. Mass. p. 332 (1841) (nec Peck).
Anisopteryx pometaria, Harris, ibidem, p. 333 (1841).
Anisopteryx vernata, Fitch, Third Rep. Ins. New York, p. 24 (1859) (nec Peck).
Anisopteryx restituens, Walker, The Canad. Nat. Vol. 5, p. 263 (1860); List Lep. Ins. Brit. Mus. Vol. 25, p. 1696 (1862).
Anisopteryx autumnata, Packard, Mon. Geom. U. S. p. 400 (1876).
Alsophila pometaria, Hulst. Trans. Amer. Ent. Soc. Vol. 23, p. 258 (1896).

8. GENUS INUROIS, PRÆC. SUBGEN.(?), BUTLER

Inurois. Butler, Ann. Mag. Nat. Hist. (5), Vol. 4, p. 445 (1879).

Characters. — Face with appressed scales. Palpus minute, rough-scaled, scarcely discernible in the type-species. Tongue wanting. Antenna in ♂ less than one-half the length of forewing, dentate, with moderate fasciculate ciliation, in ♀ almost simple. Thorax slightly hairy beneath. Femora glabrous. Hindtibia not dilated, with all spurs (though minute in ♀). Tarsi spinulose. Abdomen rather short. Wing-expanse of ♂ 24-32 mm. Wings smooth-scaled. Frenulum present. Forewing broad, costa arched, shorter in proportion than in *Alsophila*, apex less rounded (usually squared or pointed), distal margin less oblique, cell long, discocellulars rather straight, SC^1 anastomosing (always?) at a point with C, which then turns off at a rather sharp angle to costa, SC^1 afterwards anastomosing (always?) with SC^{3-5}, SC^2 arising from SC^{3-5} after their anastomosis with SC^1 (1), SC^{3-5} stalked from before apex of cell, radials normal, M^1 separate from R^3; hindwing with distal margin rounded, cell long, discocellulars normal, not biangulate, C anastomosing strongly with SC, SC^2 connate or short-stalked with R^1, usually much curved, R^2 usually weak, M^1 separate from R^3, SM^2 running into distal margin, SM^3 to anal angle. ♀ apterous, possibly without the anal tuft of *Alsophila* — we know only a single ♀, perhaps wasted.

Early stages unknown.

(1) To homologize this venation with that of those exceptional examples of *Alsophila pometaria* in which SC^2 does not arise independently, it would be more strictly correct here to say : SC^{1-2} stalked, their stalk anastomosing with that of SC^{3-5}.

This genus is so closely akin to *Alsophila* that we should have been inclined to treat it as merely a section thereof had it not already received generic rank which it seemed undesirable to obscure until it should be more intimately known. The broader wings and straighter outer line give it superficially a different aspect, but whether our differentiation by the venation will always hold remains somewhat uncertain. Without doubt this is rather variable in *Inurois*, and we have already seen that it is decidedly so in *Alsophila; A. pometaria*, with its shorter antennal ciliations, rather ample forewing, simple discocellular of hindwing and occasional (though exceptional) stalking of SC^{1-2} of forewing, tends to bridge over the space between the two genera. It is further to be added that no material in *Inurois* has been available for denuding, and that examination of the closely-approximated subcostals is by no means easy. R^2 of hindwing is generally less strong than in *Alsophila*, but this is inconstant.

Type of the genus : *Inurois tenuis*, Butler (1879).

Geographial distribution of species. — Eastern Asiatic.

1. *I. tenuis*, Butler. — Japan.
   Inurois tenuis, Butler, Ann. Mag. Nat. Hist. (5), Vol. 4, p. 445 (1879).
2. *I. membranaria* (Christoph). — S. E. Siberia, Japan.
   Anisopteryx membranaria, Christoph. Bull. Soc. Nat. Moscou, Vol. 55 (2), p. 73 (1880).
   Erannis membranaria, Meyrick, Trans. Ent. Soc. Lond. p. 81 (1892).
   Inurois membranaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 20, p. 90 (1897).

9. Genus PHTHORARCHA, Meyrick

Phthorarcha. Meyrick, Trans. Ent. Soc. Lond. p. 80 (1892)(1).

Characters. — Face with appressed scales. Palpus very short, rough-scaled, third joint minute, concealed. Tongue wanting. Antenna moderate, in ♂ serrate, with rough fascicles of very long cilia, in ♀ slightly ciliated. Thorax slightly hairy beneath. Femora glabrous. Hindtibia with short terminal spurs, medians wanting in both sexes. Tarsi strongly spinulose. Wing-expanse of ♂ 33-51 mm. Wings with smooth, shiny scaling. Frenulum developed. Forewing elongate, margins nearly straight, distal equal in length to inner, apex prominent, inner angle weak, cell long, subcostals variable. SC^1 anastomosing with C, SC^2 from cell, anastomosing first with SC^1 and then with stalk of SC^{3-5}, or sometimes SC^{1-2} long-stalked, their stalk anastomosing first with C and then with SC^{3-5}, SC^{3-5} stalked from just before apex of cell, SC^5 separating from SC^4 unusually near apex (sometimes, at least, just beyond SC^2), radials curved, M^1 approximated at its base to R^3 ; hindwing elongate, inner and distal margins almost continuous, anal angle being entirely rounded off, cell long, C anastomosing with SC to one-half of cell, SC^2 stalked with R^1, R^2 vestigial, perhaps slightly stronger towards distal margin, placed midway between R^1 and R^3, M^1 approximated to R^3, SM^3 to inner margin close to tornus. ♀ apterous, with strong anal tuft much as in *Alsophila*, perhaps even better developed.

Early stages unknown.

Clearly related to *Alsophila*, though with the wings of the ♂ more nearly approaching in shape those of *Egea*. Vein R^2 of the hindwing is really present (at least in some examples), yet so weak that

(1) Strictly speaking, it is doubtful whether the generic name obtained validity until 1895, when Staudinger published the description of the species; for « *primigena*, Staudinger », cited by Meyrick as sole species of the genus, was at that time a mere MS. name, though the *genus* was adequately described. Fortunately no question of priority is involved.

Meyrick describes it as « wholly absent »; it might have seemed logical to transfer it to the *Geometrinae*, as we have done with *Xenomusa*, but — unlike that genus — it has departed so little in any other respect from genera which must necessarily be retained in the *Œnochrominae*, that we consider we have no option but to conserve the position assigned by Meyrick. Border-line genera, though almost inevitable on evolutionary hypotheses, will always be the crux of the systematist.

Type of the genus : *Phthorarcha primigena*, Meyrick (nom. nud.) = *Anisopteryx primigena*, Staudinger (1895).

Geographical distribution of species. — Central Asia.

1. *P. primigena* (Staudinger). — **Pl. I, Fig. 6.** Zerafshan. ? Tura.
   Phthorarcha primigena, Meyrick, Trans. Ent. Soc. Lond. p. 80 (1892) (nom. nud.).
   Anisopteryx primigena, Staudinger, Iris, Vol. 7, p. 291 (1895).

10. Genus EGEA, Duponchel

Egea. Duponchel, Cat. Méth. Lép. Eur. p. 245 (1845); Guenée, Spec. Gén. Lép. Vol. 10. p. 123 (1858).
Eremia. Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 35 (1847).
Macrogonia (part.). Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, p. 62 (1855).

Characters. — Face not protuberant, with moderately appressed scales. Palpus short, rough-scaled, third joint distinct. Tongue weak. Antenna about one-half, in ♂ strongly bipectinate to apex, in ♀ simple. Thorax slightly hairy beneath. Femora glabrous. Hindtibia not dilated, all spurs present, rather long, somewhat approximated. Tarsi with a few spinules. Wing-expanse 18-22 mm. Wings narrow, those of the ♀ smaller and ill-developed. Scaling smooth. Frenulum developed. Forewing with apex prominent, cell long, SC^1 free, from close before stalk of SC^{3-5}, SC^2 absent, radials normal, M^1 well separate from R^3; hindwing with apex somewhat produced, cell rather long, C approximated to SC to middle of cell, SC^2 connate or stalked with R^1, R^2 rather weak, M^1 separate from R^3, SM^2 running to anal angle, SM^3 to inner margin. ♂ genitalia with uncus apparently very short, rounded; harpe bulged out to half centre, then narrow, parallel, rounded at apex, hairy, at centre of outer edge a globular, spined process, springing from the blunt end of an acute wedge; penis very stont; « juxta » broad, with a long point on centre.

Early stages apparently unknown.

Meyrick regards this genus as related to *Brephos*, but we cannot find any points in common. If it has any extant relatives, we should rather suspect that they would be the members of the *Alsophila* group.

Type of the genus : *Egea culminaria* (Eversmann) = *Idaea culminaria*, Eversmann (1858).

Geographical distribution of species. — Palæarctic (local, Spain, N. Africa and S. E. Russia to Central Asia).

1. *E. culminaria* (Eversmann). S. E. Russia to W. Turkestan.
   Idaea culminaria, Eversmann, Bull. Soc. Nat. Moscou, Vol. 16, p. 552 (1843).
   Fidonia desertaria, Freyer, Neue Beitr. Schmett. Vol. 5, p. 95, t. 438, f. 2 (1844).
   Egea culminaria, Duponchel, Cat. Méth. Lép. Eur. p. 245 (1845).
   Eremia culminaria, Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 35 (1847).

Egea desertaria, Heydenreich, Lep. Eur. Cat. Meth. (ed. 3), p. 53 (1851).
Macrogonia culminaria, Gumppenberg, Nova Acta, Akad. Halle, Vol 65, p. 257 (1896).

2. *E. cacuminaria*, Rambur. — Spain.
Aegea cacuminaria, Rambur, Cat. Lép. And. Vol. 2, t. 19, f. 2 (1866).
Macrogonia culminaria, var. *cacuminaria*, Gumppenberg, Nova Acta Akad. Halle, Vol. 65, p. 257 (1896).

3. *E. teneraria*, Staudinger. — Thian-shan to Ili district.
Egea teneraria, Staudinger, Iris, Vol. 5, p. 196 (1892).
Eremia coelestinaria, Alphéraky, Hor. Soc. Ent. Ross. Vol. 26, p. 456 (1892) (nom. vetust.?).
Eremia teneraria, Alphéraky, Roman. Mém. Lép. Vol. 9, p. 59, t. 4, f. 5 (1897).

4. *E. pellucida*, Staudinger. — Altai.
Egea pellucida, Staudinger, Iris, Vol. 12, p. 396 (1900).

5. *E. argentaria*, Bang-Haas. — Tunis.
Egea argentaria, Bang-Haas, Iris, Vol. 24, p. 48 (1910).

11. Genus MYINODES, Meyrick

Myinodes. Meyrick, Trans. Ent. Soc. Lond. p. 82 (1892).
Eusarca (part.). Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 34 (1847) (non Hübner, Tentamen, ined., nec Chevrolat in Agassiz, Nomencl. [1842]).
Pseudotagma. Staudinger, Iris, Vol. 5, p. 168 (1892).

Characters. — Face smooth, prominent. Palpus moderate or rather long, somewhat rough-scaled, third joint not distinct. Tongue developed. Antenna moderate, in ♂ with fascicles of short, even cilia. Thorax glabrous beneath. Legs rather slender. Femora glabrous. Hindtibia not dilated, with four rather long spurs. Tarsi not spinulose. Abdomen slender. Wing-expanse 28-30 mm. Wings ample, smooth-scaled and glossy, in ♀ rather smaller and narrower. Frenulum present. Forewing with costa nearly straight, apex not acute, distal margin gently rounded, SC^1 anastomosing very shortly with C, SC^2 anastomosing for some distance with SC^1, then more shortly with stalk of $SC^{3\text{-}4}$, $SC^{3\text{-}5}$ stalked from close to apex of cell, radials normal, M^1 separate from R^3; hindwing with distal margin rounded, C approximated to SC from near base to beyond middle of cell, SC^2 stalked with R^1, R^2 from slightly above middle of discocellulars, M^1 separate from R^3. ♂ genitalia with harpe deeply cut at apex, inner portion of apex hard chitin, outer soft and bearing hairs and ribs, on the centre of the harpe pointing inwardly a very large, somewhat bent, pointed spine; tenth segment distinctly articulated into uncus and « subscaphium »; penis long, a sharp toothed spine upon the mouth, vesica with at least one cornulus.

Early stages unknown.

Type of the genus : *Myinodes interpunctaria* (Herrich-Schäffer) = *Sterrha interpunctaria*, Herrich-Schäffer (1892).

Geographical distribution of species. — Mediterranean.

1. *M. interpunctaria* (Herrich-Schäffer). — **Pl. 1, Fig. 13.** — S. Europe, N. Africa, Syria.
Sterrha interpunctaria, Herrich-Schäffer, Deutsch. Ins., Heft 165, t. 6 (1839); Heft 172, p. 104 (1840).
Eusarca interpunctaria, Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 34 (1847).
Fidonia interpunctaria, Heydenreich, Lep. Eur. Cat. Meth. (ed. 3), p. 54 (1851).
Myinodes interpunctaria, Meyrick, Trans. Ent. Soc. Lond. p. 82 (1892).
Pseudotagma interpunctaria, Staudinger, Iris, Vol. 5, p. 168 (1892).
Anisopteryx interpunctaria, Gumppenberg, Nova Acta, Akad. Halle, Vol. 59, p. 396 (1893).

12. Genus THEOXENA, Meyrick

Theoxena. Meyrick, Trans. N. Zeal. Inst. Vol. 16, p. 56 (1884).

Characters. — Face smooth. Palpus moderate, somewhat rough-scaled. Tongue developed. Antenna about one-half length of forewing, in ♂ with rather long even fascicles of cilia, which become short towards apex. Thorax slender, glabrous beneath. Legs slender. Femora glabrous. Hindtibia not dilated, with four moderate spurs. Tarsi not spinulose. Abdomen slender. Wing-expanse 23-25 mm. Wings with smooth, glossy scaling. Frenulum present. Forewing subfalcate, rather narrow, cell just over one-half, SC^1 and SC^2 arising separate, anastomosing to form a narrow areole, then sometimes together very shortly with C, SC^2 later anastomosing strongly with the stalk of SC^{3-4}, SC^{3-5} stalked from just before apex of cell, radials normal, M^1 from well before R^3; hindwing rather long and narrow, cell about one-half, C approximated to SC to near end of cell, SC^2 short-stalked with R^1, radials normal, M^1 as in forewing.

Early stages unknown.

Type of the genus : *Theoxena scissaria* (Guenée) = *Panagra scissaria*, Guenée (1884).

Geographical distribution of species. — New Zealand.

1. *T. scissaria* (Guenée). New Zealand.
   Panagra scissaria, Guenée, Ent. M. Mag. Vol. 5, p. 43 (1868).
   Theoxena scissaria, Meyrick, Trans. N. Zeal. Inst. Vol. 16, p. 56 (1884).

13. Genus SAMANA, Walker

Samana. Walker, List Lep. Ins. Brit. Mus. Vol. 27, p. 197 (1863).

Characters. — Face with projecting cone of scales. Palpus very long, with long projecting scales, third joint not distinct. Tongue developed. Antenna moderate, in ♂ shortly ciliated, in ♀ very shortly. Thorax scarsely hairy beneath. Legs slender. Foreleg rather long. Femora glabrous. Hindtibia not dilated in ♂, all spurs present. Abdomen in ♂ slender. Wing-expanse 24-30 mm. Wings rather narrow, smoothly scaled, apices acute, in forewing falcate, especially in the ♀. Frenulum present. Forewing with cell slightly over one-half the length of wing, DC^3 strongly incurved (especially in the type-species), C free, SC^2 from cell, anastomosing strongly with SC^1 and subsequently for a short distance with stalk of SC^{3-4}, SC^{3-5} stalked from before apex of cell, R^1 normal, R^2 from nearer to R^1 than to R^3 (especially in the type-species), M^1 separate from R^3, hindwing with cell about one-half, discocellulars in the type-species nearly as in the forewing, C closely appressed to SC nearly to end of cell, SC^2 connate or very short-stalked with R^1, R^2 in the type-species arising considerably above the middle of discocellulars, M^1 separate from R^3.

Early stages unknown.

Nearly related to *Theoxena*, as first tentatively suggested by Butler (*Proc. Zool. Soc. Lond.* 1877, p. 391); Meyrick, overlooking the non-anastomosis of C with SC in hindwing, has placed it in his *Hydriomenidae* and lost sight of this relationship (*Trans. N. Zeal. Inst.* Vol. 16, p. 93). The palpus and the venation point also to a close affinity with *Epidesmia* and *Nearcha*.

Type of the genus : *Samana falcatella*, Walker (1863).

Geographical distribution of species. — New Zealand.

1. *S. falcatella*, Walker. New Zealand.
   Samana falcatella, Walker, List Lep. Ins. Brit. Mus. Vol. 27, p. 197 (1863).
   Panagra falcatella, Meyrick, Trans. N. Zeal. Inst. Vol. 16, p. 93 (1884).
2. *S. acutata*, Butler. South Island, N. Zealand.
   Samana acutata, Butler, Proc. Zool. Soc. Lond. p. 401 (1877).

14. Genus ADEIXIS, Warren

Adeixis. Warren, Novit. Zool. Vol. 4, p. 27 (1897).
Paragyrtis. Meyrick, Trans. Ent. Soc. Lond. p. 222 (1905).

Characters. — Face obliquely sloping (protuberant below), terminating in a small cone of scales. Palpus moderately long, rostriform, rough-scaled, third joint blunt, concealed. Tongue developed. Antenna not quite half the length of forewing, in ♂ bipectinate, with the inner series very short, and the apex nearly simple, in ♀ pubescent. Thorax glabrous beneath. Femora glabrous. Hindtibia in ♂ dilated, with furrow containing a small hair-pencil, all spurs present in both sexes. Tarsi somewhat spinulose. Wing-expanse 14-21 mm., the ♀ usually considerably the smaller, somewhat narrower. Wings not broad, scaling smooth and glossy. Frenulum present. Forewing with costal and distal margins nearly straight, tornus rounded, SC^1 free, though closely approximated in part to SC^2, SC^2 anastomosing with stalk of SC^{3-4} just beyond SC^5, SC^{3-5} stalked from just before apex of cell, radials normal, M^1 separate from R^3; hindwing with anal angle and termen rounded, C closely approximated to SC to about two-thirds of cell, thence rapidly diverging, SC^2 separate from R^1, R^2 from slightly nearer to R^1 than to R^3, M^1 separate from R^3. ♂ genitalia with harpe truncate, one large pyramidal soft process occupying its inner side, « subscaphium » well developed: penis as long as the genitalia, one curved cornulus.

Early stages unknown.

This genus has been assumed to be related to *Theoxena* or *Dichromodes*, but the relationship is probably not very close. Mr. G. Lyell, of Gisborne, writes us that « when netted this species shams dead and folds its wings over (enclosing) its body, with tips pressed close together, more like the habits of a Noctuid ».

Type of the genus : *Adeixis inostentata* (Walker) = *Panagra inostentata*, Walker = *Adeixis insignata*, Warren (1897).

Geographical distribution of species. — Australian.

1. *A. inostentata* (Walker). Australia, New Zealand.
   Panagra inostentata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1012 (1862).
   Adeixis insignata, Warren, Novit. Zool. Vol. 4, p. 27 (1897).
   Adeixis inostentata, Swinhoe, Trans. Ent. Soc. Lond. p. 641 (1902).
   Dichromodes griseata, Hudson, Trans. N. Zeal. Inst. Vol. 35, p. 244, t. 30, f. 5 (1903) (var. ?).
   Paragyrtis inostentata, Meyrick, Trans. Ent. Soc. Lond. p. 222 (1905).

15. Genus DICHROMODES, Guenée

Dichromodes. Guenée, Spec. Gén. Lép. Vol. 9, p 320 (1858).
Cacopsodos. Butler, Proc. Zool. Soc. Lond. p. 395 (1877).

Characters. — Face with projecting tuft of scales. Palpus moderate or long, strong, densely rough-scaled, third joint not distinct. Tongue developed. Antenna moderate, in ♂ unipectinate, the pectinations decreasing in length towards apex, in ♀ very shortly ciliated. Thorax scarcely hairy beneath. Femora glabrous. Hindtibia usually not dilated (1), all spurs present. Tarsi not conspicuously spinulose. Wing-expanse 15-30 mm. Wings somewhat variable in shape. Frenulum present. Forewing triangular, usually with margins little arched, cell moderate to rather long, discocellulars hardly oblique, C free, SC^1 nearly always free, but closely approximated to SC^2 (2), SC^2 from cell, usually anastomosing with SC^{3-4}, SC^{3-5} stalked, radials normal, R^3 separate from M^1; hindwing with distal margin usually rounded, occasionally much straighter, then with apical area appearing produced, cell about one-half, C approximated to SC to beyond middle of cell, thence diverging, usually rather rapidly, SC^2 separate from R^1, radials normal, M^1 separate from R^3. ♂ genitalia (*ainaria*) with uncus very long, pointed, articulated to tegumen, « subscaphium » very long and acute (as long as uncus), articulated to tegumen below junction with uncus; harpe long, narrow, parallel, thickened along costal half, sacculus bearing a long, sharp thorn; a long, narrow, parallel extension of the lower edge of the cucullus overlaps the thorn upon the sacculus; « juxta » very long, toothed on either side of the base, and extended to a sharp tongue-shaped point, as far as the anal opening; penis long, narrowed both at apex and base.

Fig. 1

Hindleg of *Dichromodes estigmaria* Walker, ♂.

Early stages insufficiently known (see Meyrick, *Proc. Linn. Soc. N. S. Wales* (2), Vol. 4, p. 1184).

Type of the genus : *Dichromodes ainaria*, Guenée.

Geographical distribution of species. — Australia to New Zealand.

Section I. — Hintibia of ♂ not or scarcely dilated, tarsus normal.

1. *D. ainaria*, Guenée. — Southern Australia with Tasmania.
   Dichromodes ainaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 321, t. 3, f. 5 (1858).
   Dichromodes divergentaria, ♀, Guenée, ibidem, p. 328, t. 4, f. 5 (1858).
   Cidaria metaxanthata, Walker, List. Lep. Ins. Brit. Mus. Vol. 26, p. 1734 (1862).
   Dasyuris metaxanthata, Butler, Ann. Mag. Nat. Hist. (5), Vol. 9, p. 93 (1882).
   Dichromodes subflava, ♀, Bastelberger, Berl. Ent. Zeitschr. Vol. 52, p. 60 (1907) (var. ?).
2. *D. diasemaria*, Guenée. — Southern Australia with Tasmania.
   Dichromodes diasemaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 321 (1858).
   Dichromodes uniformis, Bastelberger, Berl. Ent. Zeitschr. Vol. 52, p. 60 (1907) (var. vel ab.).

(1) But see our Section II (**Fig. 1**).
(2) As a rare aberration — we have notiqed it in a single *estigmaria* — SC^1 may anastomose shortly with SC^2.

3. **D. scothima, nov. sp.** (1), Prout. — West Australia.

4. *D. exsignata* (Walker) (*diasemaria* var. melan. ??). — Sydney, ? Tasmania.
Panagra exsignata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1010 (1861).

5. *D. usurpatrix*, Prout, nov. nom. — S. E. Australia.
Dichromodes exsignata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1178 (1890) (nec Walker).

6. *D. ornata* (Walker). — S. E. Australia, ? Queensland.
Panagra ornata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1004 (1861).
Dichromodes ornata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1189 (1890).

7 *D. sigmata* (Walker). — S. E. Australia.
Panagra sigmata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1005 (1861).
Dichromodes sigmata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1179 (1890).

8. *D. triparata* (Walker). — S. E. Australia.
Panagra molybdaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 995 (1861) (nec Guenée).
Panagra triparata, Walker, ibidem, p. 1005 (1861).
Dichromodes triparata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1190 (1890).

9. *D. atrosignata* (Walker). — S. E. Australia.
Panagra atrosignata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1006 (1861).
Eubolia linda, Butler, Ann. Mag. Nat. Hist. (5), Vol. 9, p. 96 (1882) (var. ?).
Dichromodes atrosignata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1184 (1890).

10. *D. obtusata* (Walker). — S. to S. E. Australia.
Panagra obtusata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1008 (1861).
Panagra devitata, Walker, ibidem, p. 1010 (1861).
Eubolia (?) *obtusata*, Butler, Ann. Mag. Nat. Hist. (5), Vol. 9, p. 95 (1882).
Dichromodes obtusata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1177 (1890).

10a. **D. obtusata,** var. (?) **longidens, nov.** (2), Prout. — Victoria.

11. *D. disputata* (Walker). — S. E. Australia.
Panagra disputata, Walker, List Lep. Ins. Brit. Mus. Vol 23, p. 1009 (1861).
Panagra dentigeraria, Walker, ibidem, Vol. 26, p. 1665 (1862).

12. *D. explanata* (Walker). — S. E. Australia.
Panagra explanata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1009 (1861).
Dichromodes explanata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1179 (1890).

13. *D. indicataria* (Walker). — W. to S. E. Australia.
Eubolia indicataria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1698 (1866).
Dichromodes indicataria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1186 (1890).
Dichromodes homogenes, Meyrick, M S. (in coll. Brit. Mus.).

14. *D. partitaria* (Walker) (ead. ac *sigmata*, Walker?). — W. to S. E. Australia.
Eubolia partitaria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1699 (1866).

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(1) **Dichromodes scothima, nov. sp.** — ♂, 25 mm. Palpus white at base beneath. Antennal pectinations moderate. Winge coloured nearly as in *ainaria* and *diasemaria*, basal and central areas nearly unicolorous deep fuscous, a few lighter scales in the former faintly indicating the boundaries of a slightly bent inner line and of the median band proximally; outer boundary of central area very sharply defined, from two-thirds costa to three-fourths inner margin, forming a blunt lobe outwards between R^1 and submedian fold; distal area traversed by a few indistinct brown lines or shades; marginal line black, thickened between the veins. Hindwing as in *ainaria* and the brighter forms of *diasemaria*. Underside of forewing yellowish, suffused with fuscous, costal and apical portions fuscous, discal dot dark. Of hindwing fuscous, mixed with ochreous scales except at termen. Albany, West Australia (G. C. Shortbridge). Type in coll. Br. Mus. Closely related to *diasemaria*, of which variable species it may prove to be a variety.

(2) **Dichromodes obtusata,** var. (?) **longidens, nov.** (**bon sp.** ?). — ♂♀, 22-23 mm. Darker than typical *obtusata* from Sydney, etc. especially in central area, which is filled up with dark greyish fuscous. Line between basal and central areas somewhat outcurved in middle, subdentate. Second line (outer boundary of central area) sending out two strong projections between R^3 and M^2, much as in *anelictis*. Discal dot on hindwing distinct. Underside paler, more sharply marked than in *obtusata*. Beaconsfield, Victoria (Dr. W. E. Drake). Type (♂, 23 Feb. 1904) in coll. W.E. Drake; cotype (♀, 8 March, 1905) in coll. G. Lyell.

Liodes (?) *angasi*, Felder, Reise Novara, Lep. Het. t. 131, f. 13 (1875) (var.?; an ab.?).
Dichromodes partitaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1175 (1890).

15. *D. anelictis*, Meyrick. — W. to S. E. Australia.
Dichromodes anelictis, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1172 (1890).
[*Dichromodes*] *perruptaria*, Zeller, M S. (in coll. Brit. Mus.).
(ab.?) **Dichromodes anelictis**, ab. **deprivata, nov.** (1), Prout.

16. *D. odontias*, Meyrick. — Victoria.
Dichromodes odontias, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1173 (1890).

17. *D. compsotis*, Meyrick. — S. W. Australia.
Dichromodes compsotis, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1174 (1890).

18. *D. paratacta*, Meyrick. — S. E. Australia.
Dichromodes paratacta, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1176 (1890).
Coremia strumosata, var.(?), Walker, List Lep. Ins. Brit. Mus. Vol. 25, p. 1315 (1862) (nec Guenée).

19. *D. liospoda*, Meyrick. — New South Wales.
Dichromodes liospoda, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1178 (1890).

20. *D. orthotis*, Meyrick. — S. W. Australia.
Dichromodes orthotis, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1180 (1890).

21. *D. poecilotis*, Meyrick. — W. Australia, ? Victoria.
Dichromodes poecilotis, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1181 (1890).
Dasyuris tridenta, Swinhoe, Trans. Ent. Soc. Lond. p. 649 (1902) (nov. syn.).

22. *D. ioneura*, Meyrick. — S. W. Australia.
Dichromodes ioneura, Meyrick. Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1182 (1890).

23. *D. orectis*, Meyrick. — W. to S. Australia.
Dichromodes orectis, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p 1183 (1890).

24. *D. euscia*, Meyrick. — New South Wales, Tasmania.
Dichromodes euscia, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1185 (1890).

25. *D. ophiucha*, Meyrick. — New South Wales.
Dichromodes ophiucha, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1186 (1890).

26. *D. strophiodes*, Lower. — S. W. to S. E. Australia.
Dichromodes strophiodes, Lower, Trans. Roy. Soc. S. Austral. Vol. 17, p. 155 (1893).

27. *D. orthogramma*, Lower. — Queensland.
Dichromodes orthogramma, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 81 (1894).

28. *D. orthozona*, Lower. — W. Australia.
Dichromodes orthozona, Lower, Trans. Roy. Soc. S. Austral. Vol. 27, p. 189 (1903).

29. *D. aristadelpha*, Lower. — S. Australia.
Diehromodes aristadelpha, Lower, Trans. Roy. Soc. S. Austral. Vol. 27, p. 190 (1903).

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(1) **Dichromodes anelictis**, ab. (?) **deprivata, nov.** (**bon sp.**?). — ♀. 21 mm. Head, body, etc., as in typical *anelictis*. Wings pale grey, coloured as the lightest, least ochreous-tinted examples of *anelictis*, but differing in the suppression of most of the markings. Except that the ground colour is irregularly irrorated with fuscous scales in the basal area, and more faintly elsewhere, the only markings on forewing are the central fascia, terminal line, cell-spot (apparently reduced in size, but nearly obliterated in the dark central fascia), costal dark mark at two-thirds and a double ferruginous spot (i. e., nearly bisected by the wing-fold) between R^3 and M^1 about 1 mm. distally to the outer tooth of central fascia; central fascia normally shaped, but very indistinct excepting a strongly darkened oblique patch from costa to apex of costal half of the outer tooth; fringes, hindwing and underside as in pale typical *anelictis*. Sea Lake, Victoria, 1 Oct. 1905, type in coll. D. Goudie. In the absence of more material, and especially of the ♂, the exact status of this form cannot be determined, but it deserves to have attention called to it.

30. *D. trychnoptila*, Turner. — Tasmania.
Dichromodes trychnoptila, Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 131 (1906).

31. *D. haematopa*, Turner. — Victoria.
Dichromodes haematopa, Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 131 (1906).

32. *D. triglypta*, Lower (huj. gen. ?). — S. W. Australia.
Dichromodes (?) *triglypta*, Lower, Trans. Roy. Soc. S. Austral. Vol. 32, p. 114 (1908).

33. *D. consignata* (Walker). — S. W. to S. E. Australia.
Panagra consignata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1006 (1861).
Panagra petrilineata, Walker, ibidem, p. 1008 (1861).
Dichromodes consignata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1191 (1890).

34. *D. stilbiata* (Guenée). — S. to S. E. Australia.
Liodes stilbiata, Guenée, Spec. Gén. des Lép. Vol. 10, p. 120 (1858).
Panagra plusiata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1007 (1861).
Dichromodes stilbiata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1192 (1890).

35. *D. confluaria* (Guenée). — S. E. Australia with Tasmania.
Panagra confluaria, Guenée, Spec. Gén. des Lép. Vol. 10, p. 131, t. 7, f. 8 (1858).
Dichromodes confluaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1193 (1890).

36. *D. personalis* (Felder). — S. W. Australia.
Colobochila (?) *personalis*, Felder, Reise Novara, Lep. Het., t. 120, f. 20 (1875).
Dichromodes personalis, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1194 (1890).
Epidesmia ophiosema, Lower, Trans. Roy. Soc. S. Austral. Vol. 25, p. 64 (1901) (nov. syn., sec. descr.).

37. *D. steropias*, Meyrick (1). — West Australia.
Dichromodes steropias, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1182 (1890).

38. *D. ptilomacra*, Lower. — South Australia.
Dichromodes ptilomacra, Lower, Trans. Roy. Soc. S. Austral. Vol. 15, p. 8 (1892).

39. *D. nexistriga* (Warren) (bon. sp., certo). — West Australia.
Dichromodes steropias, ab. *nexistriga*, Warren, Novit. Zool. Vol. 7, p. 101 (1900).

40. **D. rufula, nov. sp.** (2), Prout. — West Australia.

41. **D. euprepes, nov. sp.** (3), Prout. — West Australia.

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(1) This and the two following species are eccentric in the narrow wings, tuft of raised scales, long palpi, etc., and perhaps should not be allowed to remain in *Dichromodes*.

(2) **Dichromodes rufula, nov. sp.** — ♀, 20 mm. Face fuscous, tinged with red. Palpus fuscous, with base whitish beneath. Forewing rather narrow, margins nearly straight, angles pronounced; light ochreous, densely irrorated with bright red, especially in central area and behind subterminal; costal margin fuscous; the transverse lines red, consisting of three broad diffuse shades between base and first line, the middle one dusted with fuscous, first line from two-fifths costa to before one-half inner margin, oblique inwards from costa to middle of cell, then making two sharp angles outwards on M and SM^2, second line from three-fifths costa to three-fifths inner margin, dentate, the longest tooth being between M^1 and M^2, and a further line behind this, parallel to the distal margin and consisting of a series of lunules; subterminal formed as in *poecilotis*, shaded with red and fuscous irroration proximally; marginal line deep black, interrupted by the vein-ends, thickening between; discal spot moderate, oval, fuscous; fringe light fuscous on inner half, paler on outer. Hindwing with distal margin rounded; lightish fuscous, distally somewhat darker, a narrow paler band (not sharply defined) at about two-thirds; discal dot small, faint; fringe as in forewing. Underside light shining fuscous, in both wings with darker distal area and well-defined pale band at about two-thirds. Geraldton, West Australia (E. H. Saunders). Type in coll. Br. Mus.

(3) **Dichromodes euprepes, nov sp.** — ♂, 23 mm. Structural characters as in *ioneura*, palpus perhaps slightly longer. Vertex concolorous with face, not reddish-ochreous. Forewing clear light grey, irrorated with fuscous at costa and inner margin, and more faintly in distal area; a triangular blackish spot above M^2 near base; first line oblique, extremely pale yellow, extending only from middle of cell to just beyond SM^2, margined proximally by a fine brown line and distally in cell and again on M^2 by conspicuous black marks; second line straight, running obliquely from SC^5 near to apex to SM^2 at nearly two-thirds, extremely pale yellow, margined proximally with black, more or less wedge-shaped spots, namely (in addition to diffuse irregular ones from costa) on R^1, R^3, M^2 (these three nearly confluent) and SC^5, and distally by a brown line; behind this brown line some fuscous shading, much as in *ioneura* or *poecilotis*, making a sinus distally between R^1 and R^3, and a still deeper one between M^1 and and SM^2; cell-spot moderate, oval, blackish, without pale centre; marginal dots rather large, black. Hindwing and under surface nearly as in *ioneura*, slightly paler, underside of hindwing with the central line rather distinct, marked with dashes proximally on the veins. Waroona, Swan River, W. A., 26 Oct. 1907 (G. F. Berthoud). Type in coll. G. Lyell. Nearest to *ioneura*, but distinct in the straight, oblique lines and the absence of any reddish colour on the head and veins.

42. **D. berthoudi, nov. sp.** (1). Prout. West Australia.
43. **D. mesogonia, nov. sp.** (2), Prout. Victoria.
44. **D. rimosa, nov. sp.** (3), Prout. Victoria.
45. **D. mesozona, nov. spec.** (4) (Lower, M S.) Prout. Victoria.
46. **D. albitacta, nov. spec.** (5), Prout. Victoria.
47. *D. sphaeriata* (Felder). New Zealand.

Cidaria sphaeriata, Felder, Reise Novara, Lep. Het. t. 131, f. 14 (1875).
?*Dichromodes petrina*, Meyrick, Trans. N. Zeal. Inst Vol. 24, p. 216 (1892).

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(1) **Dichromodes berthoudi, nov. sp.** — ♂. 22 mm. Face dark fuscous. Palpus dark fuscous, somewhat irrorated with whitish above, not whitish beneath. Antennal pectinations moderate. Forewing dark bluish grey, irrorated with whitish and more sparsely with fuscous; lines whitish, rather indistinct, at one-third and two-thirds, first somewhat outangled close to costa and again on M, second irregularly dentate, outcurved close to costa, inbent below middle; subterminal very indistinct; distal margin narrowly paler; a marginal series of elongate black spots; fringe long, proximal half concolorous with termen of wing, distal half paler, more brownish; discal spot distinct, black. Hindwing brownish fuscous, with faint discal dot; termen and fringe nearly as in forewing. Underside unicolorous brownish fuscous. Waroona, Swan, River, W. A., 13 Oct. 1907 (G. F. Berthoud). Type in coll. G. Lyell. Distinguished from *indicataria* by larger size and small, not pale-centred discal dot; from *usurpatrix* by the course of the second line.

(2) **Dichromodes mesogonia, nov. sp.** — ♂ 20 mm. Face fuscous, irrorated with whitish. Palpus moderate, fuscous, irrorated with whitish above, and with base whitish beneath. Antennal pectinations about four and a half times as long as width of shaft. Head and thorax fuscous, irrorated with whitish, abdomen somewhat paler. Legs fuscous, with ends of joints whitish, hindtibia somewhat paler. Forewing shaped as in *triparata*, hindwing more rounded. Forewing fuscous, finely irrorated with whitish and sprinkled with dark fuscous; veins weakly marked with tawny; an ill-defined fuscous blotch in cell near base, scarcely traceable to inner margin and less oblique than in *strophiodes*; lines dark fuscous, inclosing a somewhat darkened central area; first line from costa at two-fifths to inner margin at almost one-half, slightly dentate on SC, M and SM, preceded by a slightly curved, not dentate ferruginous-fuscous line; second line from costa at two-thirds to inner margin at about two-thirds, making an obtuse projection outwards shortly below costa, and a moderate angle outwards between R^3 and M^1; to this line succeeds an indistinct one, following nearly the same course, more distinct at costa as a fuscous spot, and between R^3 and M^1, where it is light ferruginous and shaded proximally with tawny; distal margin broadly fuscous-shaded, especially towards costa, causing the fine, pale subterminal to be rather clearly defined, particularly in its costal half; cell spot elongate, fuscous, not very conspicuous; terminal line blackish, thickened into spots between the veins; fringe whitish, mixed with fuscous and intersected by broad, ill-defined fuscous line. Hindwing fuscous, weakly irrorated with whitish, presenting a uniform rather glossy aspect, and without markings; fringe concolorous. Undersurface of both wings nearly as hindwing above, but that of hindwing rather more strongly irrorated with whitish and less glossy Sea Lake, Victoria, 1. Jan., 1909. Type in coll. D. Goudie. Perhaps nearest to *strophiodes*, but differing in rounder hindwing, broader and differently-shaped central area, less variegated colouring, etc.

(3) **Dichromodes rimosa, nov. sp.** — ♂. 28 mm. Nearly of the shape of *confluaria* or *consignata*, forewing somewhat narrower, but hindwing (as in them) somewhat produced apically and with distal margin little convex. Palpus not quite so long as in *confluaria*, dark fuscous irrorated with whitish, especially above. Antennal pectinations long, the longest over eight times as long as width of shaft. Wings fuscous, profusely irrorated with whitish, on forewing also with sparser deep fuscous scales. Forewing with first line ill-defined, from before one-third of costa to just beyond one-third of inner margin, apparently sinuous but scarcely visible except as two pale spots (in cell and from inner margin to beyond SM^2), which are dark-shaded proximally and bounded by dark marks distally; second line from two-thirds of costa to two-thirds of inner margin, consisting of a series of rather irregular pale spots on the veins, those on R^1, R^3, M^1 and M^2 somewhat elongate along the veins and bounded proximally and distally by elongate deep fuscous dots (or short dashes), giving the effect of pale chinks in the middle of dark wedges; the spots (or wedges) on R^3 and M^1 are placed somewhat more distad than the others, the spot at inner margin (i. e., on SM^2) is large and accompanied by a deep fuscous mark proximally; subterminal line pale, sharply dentate, conspicuous through a strong fuscous shading proximally, but quite ill-defined distally; discal spot black, of about the same size and shape as in *consignata*; deep fuscous spots on costa at origin of the two lines; terminal line black, waved, interrupted at vein-ends and rather strongly thickened midway between veins. Hindwing almost without markings; a very faint discal dot, and a terminal line nearly as in forewing. Underside of forewing nearly without markings, an indistinct discal spot, faint traces of the commencement of pale second line on costa, and a rather distinct fuscous spot accompanying this proximally. Underside of hindwing somewhat more strongly whitish-irrorated than upper, discal spot large, moderately distinct, faint suggestions of a diffuse dark submarginal shade. Sea Lake, Victoria, 1 Oct. 1905. Type in coll. D. Goudie.

(4) **Dichromodes mesozona, nov. sp.** — ♂. 22 mm. Palpus moderate, ferruginous brownish, marked with fuscous. Antennal pectinations over three times as long as width of shaft. Thorax brownish fuscous above, abdomen somewhat paler, breast white. Fore and middle tarsus and tibia on the outside dark fuscous, broadly whitish at middle and end of tibiæ, and at end of tarsal joints; hindleg pale. Forewing with costa somewhat arched, distal margin feebly waved; colour ferruginous brownish, irrorated with white and with fuscous; an ill-defined fuscous shading close to base; a broad, deep fuscous subbasal band, as in many *Larentiinae*, closely followed by a narrow, waved one; space between this and central fascia strongly irrorated with white; central fascia rather narrow, fuscous, conspicuous, edged proximally and distally with white, its proximal margin (from near one-half inner margin to about two-fifths costa), irregular, sinuous, but maintaining a vertical pose except just at costa, where it makes a strong bend basad, its distal margin (from beyond two-thirds inner margin to about three-fifths costa) also irregular, roughly parallel with proximal margin, throwing very slight projections near costa, in middle and at inner margin; another narrow pale band succeeds, then a fuscous-brownish line parallel with distal margin of central fascia and accompanied by some ferruginous shading in inner marginal half of wing; subterminal pale, following nearly the same course as in *partitaria*, shaded broadly with fuscous and ferruginous proximally, the wing continuing rather pale distally, though much less clear than in *partitaria* (clouded with ferruginous); cell-spot rather large, deep fuscous; terminal line blackish, making teeth inwards between the veins. Hindwing brownish fuscous, nearly unicolorous, faint markings at inner margin as in *partitaria* and other species. Underside paler than upper; of forewing weakly marked, a darker cell-spot, postmedial line and marginal shading faintly indicated, of hindwing pale, rather strongly marked with fuscous. cell-spot, two postmedial lines and a marginal shade being all distinct; first postmedial line (rather near cell-spot), after curving outwards below costa, runs nearly straight across the wing from R^4 to near inner margin, there again bending outward slightly; second line nearly parallel with distal margin, dentate on veins. Nhill, interior plains of Victoria, Nov., 1902. Type in coll. G. Lyell, submitted to us under the name of *mesozona*, Lower, which appears to be unpublished. Quite distinct from any species known to us; the rather narrow, somewhat irregularly-margined (yet of uniform width) central fascia reminds vaguely of *disputata*, the distal area equally vaguely of *partitaria*; yet the coloration and many characters remove it very widely from both.

(5) **Dichromodes albitacta, nov. sp.** — ♂, 26 mm.; ♀. 24 mm. Face fuscous, irrorated with whitish. Palpus moderate, fuscous, irrorated with whitish above, and very slightly beneath, base not whitish. Antennal pectinations long (about six times as long as diameter of shaft). Forewing with costa moderately arched, apex not very acute; fuscous, much darker at base and in central area (except costally) and before subterminal line; basal patch reaching nearly to the central band, the paler interspace traversed by a slender, indistinct brown line; central band moderately broad, occupying one-third, or just over one-third of the wing, crenulate on both margins, distally slightly constricted below middle; second line represented by series of separated white dots, followed by an indistinct brown line; subterminal pale; discal spot blackish, oval, not large, vaguely pale-centred; marginal dark dots elongate; fringe nearly concolorous. Hindwing fuscous, almost unmarked. Undersurface somewhat lighter, especially of hindwing, both wings with dark discal dot and waved line at about two-thirds, the markings on the hindwing distinct. Nhill, interior plains of Victoria. Types (♂, ♀) in coll. G. Lyell.

48. *D. niger* (Butler). — New Zealand.
Cacopsodos niger, Butler, Proc. Zool. Soc. Lond. p. 395, t. 43, f. 4 (1877).
Dichromodes nigra, Meyrick, Trans. N. Zeal. Inst. Vol. 20, p. 60 (1888).

49. *D. gypsotis*, Meyrick. — New Zealand.
Cacopsodes niger, Meyrick, Trans. N. Zeal. Vol. 16, p. 94 (1884) (nec Butler).
Dichromodes nigra, Meyrick, ibidem, Vol. 18, p. 184 (1886) (in err.).
Dichromodes gypsotis, Meyrick, ibidem, Vol. 20, p. 60 (1888).

50. *D. ida*, Hudson. — New Zealand.
Dichromodes ida, Hudson, Trans. N. Zeal. Inst. Vol. 37, p. 356, t. 22. f. 2 (1905).

SECTION II. — Hindtibia of ♂ greatly dilated, tarsus abbreviated.

51. *D. molybdaria* (Guenée). — S. E. Australia.
Panagra molybdaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 131 (1858).
Panagra carbonata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1004 (1861).
Dichromodes molybdaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1187 (1890).

52. *D. estigmaria* (Walker) (præc. ab.?). — S. E. Australia.
Panagra estigmaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1001 (1861).
Panagra costinotata, Walker, ibidem, p. 1001 (1861).
Acidalia schistacearia, Walker, ibidem, Vol. 26, p. 1609 (1862).

53. *D. ischnota*, Meyrick. — **Pl. I, Fig. 10.** — S. W. to S. E. Australia.
Dichromodes ischnota, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1189 (1890).

16. GENUS ARCINA, WALKER

Arcina. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1743 (1862) (1).
Prorocrania. Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 225 (1904) (nov. syn.).

Characters. — Face with strong anterior convexity, clothed with appressed scales. Palpus rather long, subascending, rostriform, slightly hairy. Tongue well developed. Antenna in ♂ bipectinate almost to apex, the pectinations slender and not very long, particularly the inner series. Thorax slightly hairy beneath. Legs rather long and slender. Femora glabrous. Hindtibia with median spurs present. Wing-expanse 38-40 mm. Wings rather elongate, smooth-scaled. Frenulum present. Forewing with distal margin very oblique, slightly convex, costa nearly straight, cell about one-half, discocellulars vertical, SC^1 anastomosing at a point with SC^2, SC^2 then very closely approximated to (sometimes anastomosing with, fide Turner) the stalk of SC^{3-4}, SC^5 short-stalked with SC^{3-4} from just before upper angle of cell, radials normal, M^1 separate from R^3; hindwing considerably produced at apex, cell about one-half, C closely appressed to SC to two-thirds of cell, thence rapidly diverging, SC^2 from close before apex of cell, radials normal, M^1 separate from R^3.

Early stages unknown.

Type of the genus : *Arcina fulgorigera*, Walker (1862).

Geographical distribution of species. — Australian.

1. *A. fulgorigera*, Walker. — West Australia.
Arcina fulgorigera, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1744 (1862).
Prorocrania argyritis, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 226 (1904) (nov. syn.).

(1) Warren's note on this genus (*Novit. Zool.* Vol. 4, p. 124) is clearly founded on a misidentification, as his remarks do not at all agree with the true *Arcina*.

17. Genus NEARCHA, Meyrick

Nearcha. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1152 (1890).

Characters. — Face with projecting cone of scales. Palpus moderate or long, with long rough projecting scales. Tongue developed. Antenna of moderate length, in ♂ bipectinate almost or quite to apex, in ♀ minutely ciliated. Thorax moderately hairy beneath. Femora glabrous. Hindtibia with all spurs, the inner median usually long; in ♂ usually dilated, with hair-pencil. Tarsi with scattered spinules. Wing-expanse 21-41 mm. Hindwing beneath in ♂ often tufted with hair about the cell and subcostals, the largest tuft (curled) near base of SC. Frenulum present. Forewing with apex acute to somewhat produced (somewhat more rounded in Section III), cell about one-half, C free, SC^1 anastomosing strongly with SC^2, SC^2 later anastomosing or connected at a point with SC^{3-4}, SC^{3-5} stalked from shortly before R^1, radials normal, M^1 separate from R^3; hindwing with apex usually rounded (in *curtaria* and *pseudophaes* produced), cell rather short, C approximated to SC nearly to end of cell, SC^2 stalked with R^1, R^2 usually normal (twisted in *ursaria* ♂), M^1 separate from R^3 (**Pl. 2, Fig. 2**). Sexual dimorphism usually pronounced. ♂ genitalia, so far as known, suggest that the tufted-winged and the non-tufted-winged sections are by no means closely related, but much more research is needed; in *subcelata* with uncus simple, harpe with battledore extension, a strong spine upon the upper edge of the sacculus and a rounded clubbed organ arising from the central portion of the harpe, penis extraordinarily long, one-third longer than the genitalia; in *staurotis* and *ophla* with uncus bifurcate, rounded lobed harpe, and numerous very definite hard spines connected with the lobe, also a small single spine or claw towards the base of the harpe, penis short in *staurotis*, long in *ophla*.

Early stages unknown.

Type of the genus : *Nearcha buffalaria* (Guenée) = *Panagra buffalaria*, Guenée.

Geographical distribution of species. — Australian.

Section I. — Hindwing of ♂ tufted with hair beneath, venation normal; hindtibia of ♂ with hair-pencil.

1. *N. buffalaria* (Guenée). — S. W. to S. E. Australia.
   Panagra buffallaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 128 (1858).
   Tephrina tristificata, ♀, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 967 (1861).
   Panagra transactaria, ♀, Walker, ibidem, p. 999 (1861).
   Panagra resignata, ♀, Walker, ibidem, p. 1003 (1861).
   Nearcha buffalaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1154 (1890).
2. *N. subcelata* (Walker). — S. E. Australia.
   Panagra sparsularia (part.), Walker, List Lep. Ins. Brit. Mus. Vol. 23, 995 (1861) (nec Guenée).
   Panagra subcelata, Walker, ibidem, p. 997 (1861).
   Nearcha subcelata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1157 (1890).
3. *N. aridaria* (Walker). — S. W. to E. Australia.
   Tephrina aridaria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1662 (1866).
   Nearcha aridaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1155 (1890).
4. *N. atyla*, Meyrick. — W. Australia.
   Nearcha atyla, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1157 (1890).

5. *N. benecristata*, Warren. — N. Australia.
   Nearcha benecristata, Warren, Novit. Zool. Vol. 2, p. 83 (1895).
6. *N. prosedra*, Turner. — Queensland.
   Nearcha prosedra, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 226 (1904).
7. *N. didymochroa*, Lower (huj. sect.?). — Queensland.
   Nearcha didymochroa, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 80 (1894).

SECTION II. — Both wings of ♂ tufted beneath; venation distorted; hindtibia of ♂ with hair-pencil.

8. *N. ursaria* (Guenée). — S. E. Australia.
   Panagra ursaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 129 (1858).
   Nearcha oxyptera, Lower, Trans. Roy. Soc. S. Austral. Vol. 27, p. 188 (1903).

SECTION III. — Wings of ♂ not tufted beneath; hindtibia of ♂ with hair-pencil.

9. *N. staurotis*, Meyrick. — S. W. to N. Australia.
   Nearcha staurotis, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1153 (1890).
10. *N. caronia*, Swinhoe (præc. var.?). — N. W. Australia.
   Nearcha caronia, Swinhoe, Trans. Ent. Soc. Lond. p. 641 (1902).
11. *N. ophla*, Swinhoe.[1] — **Pl. I, Fig. 15.** — W. to S. Australia.
   Nearcha ophla, Swinhoe, Ann. Mag. Nat. Hist (7), Vol. 9, has p. 79 (1902).
   Nearcha pseudophaes, Warren, Novit. Zool. Vol. 9, p. 349 (1902) (nec Lower) (nov. syn.).
   Nearcha pseudophaes, ab. *innotata*, Warren, ibidem, p. 349 (1902) (ab.).
   Nearcha pseudophaes, ab. *notata*, Warren, ibidem, p. 349 (1902) (ab.).
   Nearcha pseudophaes, ab. *strigata*, Warren, ibidem, p. 349 (1902) (ab.).
   ? *Nearcha anemodes*, Lower, Trans. Roy. Soc. S. Austral. Vol. 26, p. 227 (1902) (var.?; an ab.?).
   Nearcha pyrosema, Lower, ibidem, Vol. 27, p. 188 (1903) (ab.)
12. **N. recisa, nov. sp.**(1), Prout. — West Australia.
13. *N. paraptila*, Meyrick (huj. sect.?). — Queensland.
   Nearcha paraptila, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1156 (1890).
14. *N. nephocrossa*, Turner (huj. sect.?). — Queensland.
   Nearcha nephocrossa, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 227 (1904).

SECTION IV. — Wings of ♂ not tufted beneath; hindtibia of ♂ without hair-pencil.

15. *N. curtaria* (Guenée). — S. E. Australia, Tasmania.
   Panagra curtaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 129 (1858).
   Panagra corrogata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 997 (1861).
   Gorytodes (?) *curtaria*, Butler, Ann. Mag. Nat. Hist. (5), Vol. 9, p. 93 (1882).
   Nearcha curtaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1158 (1890).
16. *N. pseudophaes*, Lower. — S. to S. E. Australia.
   Nearcha pseudophaes, Lower, Trans. Roy. Soc. S. Austral. Vol. 17, p. 155 (1893).

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(1) **Nearcha recisa, nov. sp.** — ♂, 31 mm. Face blackish, vertex pale grey, ochreous-tinged. Palpus slightly longer than in *staurotis*, blackish, whitish beneath first joint, and more narrowly beyond. Antenna whitish grey, pectinations long, dark grey. Forewing pale grey, faintly ochreous tinged and minutely irrorated with fuscous; costa very narrowly fuscous to beyond first line; lines very slightly paler, only rendered conspicuous by the dark markings which accompany them; first at one-third, bounded distally by four fuscous spots, one at costa (diffuse, not very distinct), one beyond cell, and two at inner margin (almost confluent); second line at just beyond two-thirds, edged proximally by a fine sinuate line which throws out a series of strong triangular teeth basad, and posteriorly by a diffuse, deep fuscous shade from R^4 to inner margin. Cell-spot rather large, deep fuscous with pale centre. Subterminal indistinct, only brought out by the fuscous irroration of the rest of the marginal area. Marginal dots distinct, somewhat elongate. Hindwing concolorous, postmedial line slightly sinuate towards inner margin, margined with fuscous teeth proximally. No inner line or cell-spot. Subterminal and margin as in forewing. Underside nearly unicolorous, a distinct cell-spot on each wing. Bridgetown, W. A., Nov. 1904. Type in coll. G. Lyell. Extremely close to the variable *staurotis*, of which it might be a giant-form, but that palpus and pectinations seem appreciably longer.

2

Ozola picaria Swinhoe, ♂

1

Celerena commutata Walker, ♂

5

Phellinodes uniformis Warren, ♂

4

Racasta extendata Dognin, ♂

6

Phthorarcha primigena Meyrick, ♂

8

Epidesmia hypenaria Guenée, ♀

7

Gastrophora henricaria Guenée, ♂

9

Œnochroma polyspila Lower, ♂

16

Sarcinodes susana Swinhoe ♂

11

Taxeotis subvelaria, Walker, ♂

10

Dichromodes ischnota Meyrick, ♂

12

Antasia flavivaputata Guenée, ♂

13

Mylinodes interpunctaria H.Schaeff, ♂

14

Naxa angustaria Leech, ♂

15

Nearcha ophla Swinhoe, ♀

18

Cartaletis gracilis ab pallida Warren, ♂

3

Ametris nitocris Cramer, ♂

17

Epidesmia cygnea Prout, ♀

19

Diceratucha xenopis Lower, ♂

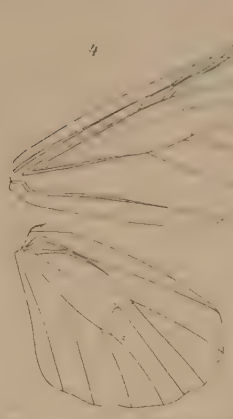
FAM. GEOMETRIDÆ.

SUBFAM. OENOCHROMINÆ.

1 *Alsophila aescularia Schiffermüller,* ♂

2 *Nearcha ophla Swinhoe,* ♂

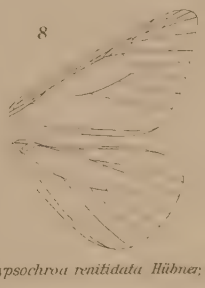
3 *Gastrophora henricaria Guenée,* ♀



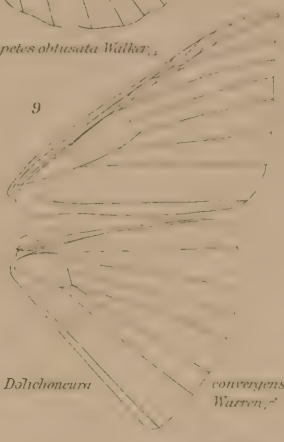
4 *Circopetes obtusata Walker,* ♂

5 *Sarcinodes carnearia Guenée,* ♂

7 *Heliothea discoidaria Boisduval,* ♀

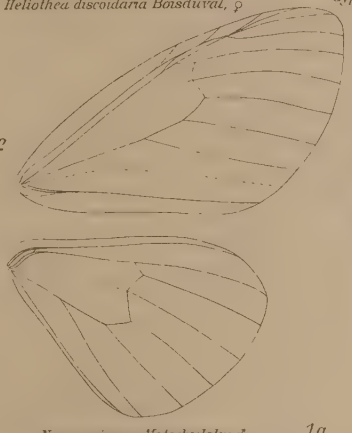


8 *Gypsochroa renitidata Hübner,* ♂

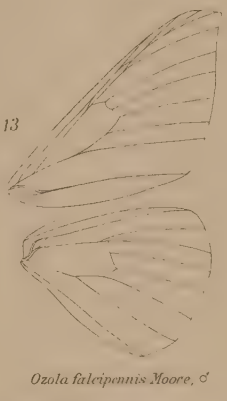


9 *Dolichoneura* ♂ *convergens Warren,* ♂

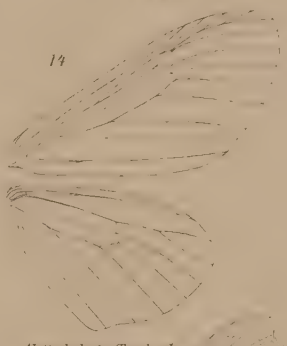
10 *Leptoctenopsis melusina Proul,* ♂



12 *Naxa seriaria Motschulsky,* ♂

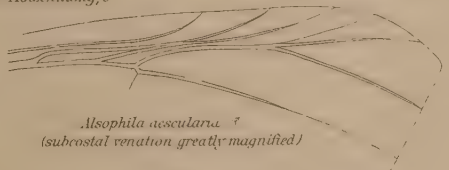


13 *Ozola falcipennis Moore,* ♂



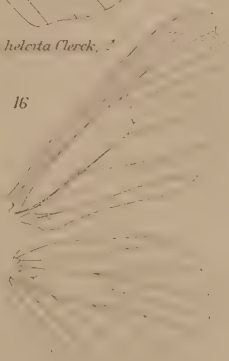
14 *Aletis helcita Clerck,* ♂

15 *Ametris nilocris Cramer,* ♀



1 *a*
Alsophila aescularia ♂
(subcostal venation greatly magnified)

12 *a*
Naxa seriaria Motschulsky, ♂
(subcostal venation greatly magnified)



16 *Phellinodes uniformis Warren,* ♂

FAM. GEOMETRIDÆ

SUBFAM. OENOCHROMINÆ

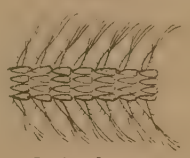
18. Genus ANTASIA, Warren

Antasia. Warren, Novit. Zool. Vol. 1, p. 366 (1894).

Darantasia. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1743 (1862); Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1151 (1890) (nec Walker, Journ. Linn. Soc. Lond. Vol. 3, p. 186 [1859]).

Characters. — Face with projecting cone of scales. Palpus rather long, strong, slightly rough-scaled, terminal joint small. Tongue developed. Antenna moderate, in ♂ shortly bipectinate, the pectinations surmounted with fascicles of cilia (**Fig. 2**), in ♀ laminate, almost simple. Thorax somewhat hairy beneath. Legs rather long. Femora glabrous. Hindtibia not dilated, with all spurs. Tarsi with scattered spinules. Wings-expanse (? 18-) 28-37 mm. Wings ample. Frenulum developed. Forewing with cell nearly one-half, SC^1 anastomosing with SC^2, the coincident portion connected by a bar with C, SC^2 later anastomosing with SC^{3-4}, SC^{3-5} stalked, radials normal, M^1 separate from R^3; hindwing with cell rather short, lower DC very oblique, C approximated to SC nearly to end of cell, SC^2 shortly stalked with R^1, radials normal, M^1 separate from R^3.

Fig. 2



Section of antenna of *Antasia flavicapitata*, Guenée, ♂.

Early stages apparently unknown.

Type of the genus : *Antasia flavicapitata* (Guenée) = *Tephrina flavicapitata*, Guenée (1894 [1862]).

Geographical distribution of species. — Australian.

1. *A. flavicapitata* (Guenée). — **Pl. 1, Fig. 12.** S. to S. E. Australia with Tasmania.
   Tephrina flavicapitata Guenée, Spec. Gén. Lép. Vol. 10, p. 98 (1858).
   Tephrina capitata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 965 (1861).
   Darantasia mundiferaria, Walker, ibidem, Vol. 26, p. 1743 (1862).
   Eubolia capitata, Butler, Ann. Mag. Nat. Hist. (5), Vol. 9, p. 95 (1882).
   Darantasia flavicapitata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1152 (1890).
   Antasia flavicapitata, Warren, Novit. Zool. Vol. 1, p. 366 (1894).
2. *A. pachygramma* (Lower) (huj. gen.?). West Australia.
   Darantasia pachygramma, Lower, Trans. Roy. Soc. S. Austral. Vol. 17, p. 154 (1893).

19. Genus ENCRYPHIA, Turner

Encryphia. Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 228 (1904).

Characters. — Face not protuberant, with appressed scales. Palpus moderate, second joint densely rough scaled, third joint moderate. Tongue present. Antenna in ♂ bipectinate almost to apex, the pectinations rather short but each terminating in a long curved bristle, in ♀ minutely ciliated and with paired bristles. Thorax somewhat hairy beneath. Femora hairy. Hindtibia in ♂ dilated, with hair-pencil, in both sexes with all spurs present. Wing-expanse 29-34 mm. Frenulum present. Forewing with costa scarcely arched, apex acute, distal margin not very oblique, cell about one-half, SC^1 anastomosing shortly with C, SC^{2-5} stalked from before apex of cell, SC^2 anastomosing shortly with SC^1 and later with stalk of SC^{3-4}, radials normal, M^1 separate from R^3; hindwing broad, with distal margin rounded, cell about one-half, C approximated to SC for some distance near base (yet not so closely appressed as in the surrounding genera), thence gradually diverging, SC^2 connate with or separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

This interesting genus bears much resemblance, in general facies, venation and antennal build, to the African *Panagropsis* and others of our Group II, to which further study will perhaps remove it; in hindwing structure it seems to make a transition in that direction, SC taking a similar course near base, yet diverging from C more gradually.

Type of the genus : *Encryphia frontisignata* (Walker) = *Tacparia* (?) *frontisignata,* Walker = *Encryphia argillina,* Turner (1904).

Geographical distribution of species. — Australian.

1. *E. frontisignata* (Walker). Queensland.
   Tacparia (?) *frontisignata,* Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1523 (1862).
   Tephrina punctilineata, Walker, ibidem, Vol. 35, p. 1661 (1866) (nov. syn.).
   Encryphia argillina, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 228 (1904) (nov. syn.).

20. Genus ZEUCTOPHLEBIA, Warren

Zeuctophlebia. Warren, Novit. Zool. Vol. 3, p. 355 (1896).

Characters. — Face not protuberant, with appressed scales. Palpus moderate, rough-scaled, third joint very short. Tongue developed. Antenna in ♂ bipectinate with long pectinations, at apex simple, in ♀ undescribed (unknown to us). Thorax somewhat hairy beneath. Femora glabrous. Hind-tibia with all spurs. Wings-expanse 22-26 mm. Frenulum present. Forewing with costa gently arched, apex subfalcate, SC^{1-2} stalked, their stalk anastomosing with C, SC^{2} further anastomosing with SC^{3-4}, SC^{3-5} stalked from before apex of cell, radials normal, M^{1} separate from R^{3}; hindwing with distal margin rounded, C closely approximated to cell to beyond one-half, then gradually diverging, SC^{2} connate with or approximated to R^{1}, radials normal, M^{1} separate from R^{3}.

Early stages unknown.

Type of the genus : *Zeuctophlebia squalidata* (Walker) = *Fidonia squalidata,* Walker = *Zeuctophlebia rufipalpis,* Warren (1896).

Geographical distribution of species. — Australian.

1. *Z. squalidata* (Walker). Queensland.
   Fidonia squalidata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1671 (1862).
   Zeuctophlebia rufipalpis, Warren, Novit. Zool. Vol. 3, p. 355 (1896) (nov. syn.).
2. *Z. tapinodes,* Turner. Queensland.
   Zeuctophlebia tapinodes, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 228 (1904).

21. Genus TAPINOGYNA, nov. gen., Prout

Tapinogyna, nov. gen. Prout.

Characters. — Face with appressed scales. Palpus moderate, second joint rough-scaled, third joint moderate. Tongue present. Antenna moderate; in ♂ bipectinate with short slender pectinations each terminating in a fascicle of cilia, apex with the fascicles sessile; in ♀ minutely ciliated, nearly

simple. Thorax scarcely hairy beneath. Femora glabrous. Hindtibia not dilated, with four rather long spurs. Tarsi not spinulose. Abdomen in ♂ slender. Wing-expanse 28 mm. (♂), 20 mm. (♀). Wings ample, rather slender. Frenulum developed. Forewing with costa well arched, apex not acute, distal margin slightly convex (straighter in ♀), cell one-half, C well removed from SC, SC^{1-2} anastomosing strongly, their anastomosed portion connected with C by a rather long bar, SC^2 later anastomosing briefly with SC^{3-4}, SC^{3-5} stalked from before apex of cell, radials normal, M^1 separate from R^3; hindwing with costa long, distal margin long, distal margin little rounded, apical region therefore produced, yet rounded at apex, C approximated to SC to one-half of cell, SC^2 separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Probably related to *Taxeotis*, differing in shape and texture of the wings and in the ♂ antennal structure, which approaches that of *Antasia*. The discrepancy of size in the sexes is also noteworthy.

Type of the genus : *Tapinogyna perichroa* (Lower) = *Darantasia perichroa*, Lower.

Geographical distribution of species. — Australian.

1. *T. perichroa* (Lower). Victoria.
Darantasia perichroa, Lower, Trans. Roy. Soc. S. Austral. Vol. 27, p. 187 (1903).

22. Genus TAXEOTIS, Meyrick

Taxeotis. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1140 (1890).

Characters. — Face with appressed scales. Palpus moderate, occasionally rather long, second joint rough-scaled. Tongue developed. Antenna moderate, in both sexes shortly ciliated. Thorax glabrous beneath. Femora glabrous. Hindtibia not dilated, all spurs present. Tarsi not spinulose. Wing-expanse 15-34 mm. Wings moderately broad. Frenulum developed. Forewing with costa not exceptionally arched, apex more or less acute, distal margin entire, little convex, SC^1 anastomosing strongly with SC^2, the anastomosed portion usually connected by a bar with C, occasionally anastomosing briefly therewith, occasionally disconnected (i. e., with C free), SC^2 further anastomosing with stalk of SC^{3-4}, SC^{3-5} stalked from shortly before apex of cell, radials normal, M^1 separate from R^3; hindwing with distal margin rounded, C approximated to SC to about one-half of cell, SC^2 separate from R^1, radials normal, M^1 separate from R^3. ♂ genitalia (*inconcisata*) with uncus extremely small, finely pointed, articulated to tegumen; harpe short, straight, costa thickened, hairy, outer margin boldly rounded, no armature; penis of extreme length, bearing on apex one long spine of hardened chitin, the basal bulb absent, replaced by a small, curved foot, entrance of genital tube very large.

Early stages undescribed.

Type of the genus : *Taxeotis inconcisata* (Walker) = *Panagra inconcisata*, Walker = *Taxeotis delogramma*, Meyrick.

Geographical distribution of species. — Australian.

Section I. — Forewing with C connected with SC^{1-2}.

1. *T. inconcisata* (Walker). Australia.
Panagra inconcisata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1003 (1861).

Taxeotis delogramma, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1146 (1890).
Taxeotis inconcisata, Swinhoe, Trans. Ent. Soc. Lond. p. 641 (1902).

2. *T. intextata* (Guenée) (species dubia, sed huj. gen. cert.; ead. ac sequ.?). — Australia.
Panagra intextata, Guenée, Spec. Gén. Lép. Vol. 10, p. 130 (1858).

3. *T. perlinearia* (Walker). — S. to E. Australia.
Panagra perlinearia, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 998 (1861).
Panagra areniferata, Walker, ibidem, p. 998 (1861).
Panagra explicataria, Walker, ibidem, p. 999 (1861).
Taxeotis intextata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1147 (1890) (? Guenée).

4. *T. collineata*, Warren (præc. var. ?). — Queensland.
Taxeotis collineata, Warren, Novit. Zool. Vol. 6, p. 13 (1899).

5. *T. egenata* (Walker). — Queensland.
Panagra egenata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 997 (1861).
Taxeotis egenata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1148 (1890).

6. *T. subvelaria* (Walker). — **Pl. 1, Fig. 11.** — S. to S. E. Australia with Tasmania.
Panagra subvelaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1000 (1861).
Panagra reserata, Walker, ibidem, p. 1010 (1861) (nov. syn.).
Taxeotis isophanes, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1150 (1890) (nov. syn.).
Taxeotis subvelaria, Meyrick, ibidem, p. 1214 (1890); Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 322 (1900).

7. *T. intermixtaria* (Walker). — S. E. Australia.
Panagra intermixtaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1000 (1861).
Panagra promelanaria, Walker, ibidem, Vol. 26, p. 1666 (1862).
Taxeotis intermixtaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1149 (1890).

8. *T. exsectaria* (Walker). — S. W. to S. E. Australia.
Panagra exsectaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 1011 (1861).
Taxeotis exsectaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1144 (1890).

9. *T. isomeris*, Meyrick. — S. W. Australia.
Taxeotis isomeris, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1144 (1890).

10. *T. anthracopa*, Meyrick. — Sydney to Tasmania.
Taxeotis anthracopa, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1145 (1890).

11. *T. epigypsa*, Meyrick. — S. Australia.
Taxeotis epigypsa, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1149 (1890).

12. *T. philodora*, Meyrick. — S. W. Australia.
Taxeotis philodora, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1151 (1890).

13. *T. gonosemela*, Lower (huj. sect. ?). — S. Australia.
Taxeotis gonosemela, Lower, Trans. Roy. Soc. S. Austral. Vol. 17, p. 154 (1893).

14. *T. goniogramma*, Meyrick. — Queensland.
Taxeotis goniogramma, Meyrick, Trans. Ent. Soc. Lond. p. 376 (1897).

15. *T. pelopa*, Meyrick. — Victoria.
Taxeotis pelopa, Meyrick, Trans. Ent. Soc. Lond. p. 377 (1897).

16. *T. phaeopa*, Lower. — New South Wales.
Taxeotis phaeopa, Lower, Proc. Linn. Soc. N. S. Wales, Vol. 24, p. 84 (1899).

17. *T. semifusca*, Warren. — Queensland.
Taxeotis semifusca, Warren, Novit. Zool. Vol. 6, p. 324 (1899).

18. *T. holoscia*, Lower. — Queensland.
Taxeotis holoscia, Lower, Trans. Roy. Soc. S. Austral. Vol. 27, p. 186 (1903).

19. *T. xanthogramma*, Lower. — Victoria.
Taxeotis xanthogramma, Lower, Trans. Roy. Soc. S. Austral. Vol. 27, p. 186 (1903).

20. *T. acrothecta*, Turner. — Queensland.
Taxeotis acrothecta, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 223 (1904).

21. *T. orphnina*, Turner. — Queensland.
Taxeotis orphnina, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 224 (1904).

22. **T. adelia, nov. spec.** (1), Prout. — Victoria.

23. **T. calypsis, nov. sp.** (2), Prout. — West Australia.

24. **T. bigeminata, nov. sp.** (3), Prout. — West Australia.

Section II. — Forewing with C free.

25. *T. endela*, Meyrick. — S. E. Australia.
Taxeotis endela, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1142 (1890).

26. *T stereospila*, Meyrick. — S. E. to E. Australia.
Taxeotis stereospila, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1142 (1890).

27. *T. oraula*, Meyrick. — Mount Kosciusko, N. S. W.
Taxeotis oraula, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol 4, p. 1143 (1890).

28. *T. dasyzona*, Lower. — S. Australia.
Taxeotis dasyzona, Lower, Trans. Roy. Soc. S. Austral. Vol. 27, p. 185 (1903).

29. *T. adelpha*, Turner. — New South Wales.
Taxeotis adelpha, Turner, Trans. Roy. Soc. S Austral. Vol. 28, p. 224 (1904).

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(1) **Taxeotis adelia, nov. sp.** — ♂, 19 mm. Face blackish fuscous. Palpus blackish fuscous with the base sharply white beneath. Head, thorax and wings grey, irrorated with fuscous, abdomen and underside slightly paler. Forewing with apex acute, distal margin straight in anterior half but not concave; lines fine, ferruginous, the first at about one-third, perpendicular, sometimes accompanied by fuscous spots at costa, on median, and submedian to inner margin, second at just beyond two-thirds, more or less sinuate from R^1 to inner margin, marked with fuscous spots, and preceded on costa by a fuscous dash much as in *inconcisata* but *parallel with distal margin* (in *inconcisata* it is oblique outwards); second line usually followed by a diffuse fuscous shade; terminal line broken into a series of linear dark marks, less dot-like than in *inconcisata*; cell-spot distinct, black. Hindwing with a furruginous postmedial line from inner margin, losing itself after middle of wing, finer and straighter than in *inconcisata*; terminal line as in forewing; cell-spot fine, blackish. Fringes of both wings with the proximal half concolorous with the wing, the distal somewhat paler, a sharp dividing-line as in *inconcisata*. Under surface with the cell-spots present, though less sharp, faint traces of the postmedial line on both wings, and usually a distinct fuscous mark close to tornus of hindwing. Gisborne, Victoria, G. Lyell, Jan. to Feb. Type in coll. G. Lyell; co-types in coll. L. B. Prout. Very like a miniature *inconcisata*, yet the differences are too significant to justify the assumption that it might be a second generation of that species (which appears at Gisborne in November and December).

(2) **Taxeotis calypsis, nov. sp.** — ♀, 21 mm. Face dark ferruginous. Palpus dark ferruginous above, sharply white below, except towards the tip. Forewing broad, scarcely produced, distal margin very faintly sinuate inwards anteriorly, somewhat gibbous posteriorly; grey minutely irrorated with white, vaguely marked transversely with numerous brownish lines, and irregularly dotted with fuscous, in distal area somewhat more ferruginous-tinged; markings indistinct, consisting of a small blackish cell-spot, fuscous dots on veins before one-third, representing first line, a fuscous dash from costa (parallel with termen) beyond two-thirds, followed (very slightly distad) by a row of spots between the veins, representing second line, those between R^2-R^3 and R^3-M^1 placed somewhat further distad, a few indistinct fuscous spots before subterminal (which otherwise is scarcely indicated), and a row of blackish dots at the vein ends. Hindwing without distinct markings, with faint traces of a postmedial line from inner margin, terminal dots nearly as in forewing. Fringe of both wings long, fuscous proximally, pale marginally, with a sharp dividing-line. Under surface of forewing light fuscous, of hindwing paler, both densely speckled with darker fuscous, and without definite markings except the cell-spots. Waroona, Swan River, W. A., 16 Nov. 1907 (G. F. Berthoud). Type in coll. G. Lyell. Likewise related to *inconcisata*, but distinct in the more ferruginous face and palpus, the position and course of the second line, with its attendant costal mark, the dense covering of darkened scales and lines, the general indistinctness of the markings, etc.

(3) **Taxeotis bigeminata, nov. sp.** — ♂, 16 mm. Face and palpus fuscous, ferruginous-tinged, palpus basally whitish below. Ochreous grey, finely irrorated with fuscous. Forewing with lines rather thick, deep fuscous. First from SC beneath one-third of costa, faintly sinuate, to just proximally to one third of inner margin, closely preceded by a similar line, finer and rather less dense; second from two thirds of costa to beyond two-thirds of inner margin, less strong from costa to R^1, sharply oblique outwards from SC^5 to R^1, sinuate inwards behind cell and again faintly in its lower half, closely followed, from R^1 to inner margin, by a similar but much less dense fuscous line; cell-spot small, blackish; a row of blackish dots at vein-ends. Hindwing with minute cell-spot, fuscous postmedial line, only conspicuous at inner margin and losing itself before middle of wing, closely followed by a less conspicuous short fuscous streak from inner margin, and blackish dots at vein-ends. Under surface with cell-spots, and on forewing faint traces of the second line, otherwise without markings. Sherlock River, W. A. (E. Clements). Type in coll. Br. Mus. The specimen is not in perfect condition, but it is a conspicuous little species on account of its strong, double transverse lines.

30. *T. epigaea*, Turner. Queensland.
Taxeotis epigaea, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 225 (1904).
31. **T. mimela, nov. sp.** (1), Prout. Victoria.

23. Genus EPIDESMIA, Westwood

Epidesmia. Westwood, Duncan, Exot. Moths, p. 220 (1841).
Hemagalma. Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, Heft 16 (1855) (indescr.); Syst. Bearb. Schmett. Eur. Vol. 6, p. 133 (1856).
Phrataria. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1742 (1862).

Characters. — Face nearly always slightly prominent, smooth (*chilonaria*, *tryxaria*, *perfabricata*, etc.), or with slightly projecting scales (*hypenaria*, *reservata*) or frontal tuft (*tricolor*). Palpus long, rough-scaled, attenuated. Tongue developed. Antenna moderate to longish, in ♂ unipectinate (**Fig. 3**), towards apex simple, in ♀ minutely ciliated, slender. Thorax slightly hairy beneath. Femora glabrous. Hindleg rather long, its tibia not dilated, all spurs present, unequal. Tarsi not spinulose. Wing-expanse 25-64 mm. Frenulum present. Wings variable in shape. Forewing with apex usually acute, cell about one-half, C free, SC^1 anastomosing rather strongly with SC^2, SC^2 more shortly with SC^{3-4}, SC^{3-5} stalked, radials normal, M^1 separate from R^3; hindwing often produced at SC^2, cell about one-half, C closely approximated to SC from more or less near base to about two-thirds, thence divergent, SC^2 separate from R^1, or sometimes connate, radials normal, M^1 separate from R^3. ♂ genitalia (*tryxaria*) with harpe rather wide and obtuse, « subscaphium » developed, delicately scobinated at the point; penis enormous, heavily armed, one-third longer than the genitalia.

Fig. 3

Section of antenna of *Epidesmia tryxaria*, Guenée, ♂.

Early stages unknown?

A not very compact genus, wich would possibly bear subdivision according to the form of hindwing (*Epidesmia* with apex strongly produced, *Phrataria* with apex normal), the character of the frons, the size of the « basal cell » of the hindwing, etc.

Type of the genus : *Epidesmia tricolor*, Westwood (1841).

Geographical distribution of species. — Australian, one species straggling into New Guinea.

1. *E. tricolor*, Westwood. New South Wales.
Epidesmia tricolor, Westwood, Duncan, Exot. Moths, p. 220, t. 28, f. 1 (1841).
2. *E. chilonaria* (Herrich-Schäffer). S. E. Australia.
Hemagalma chilonaria, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1 (16), t. 62, f. 350 (1855).
Panagra aurinaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 127, t. 7, f. 7 (1858).
Epidesmia chilonaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1162 (1890).

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(1) **Taxeotis mimela, nov. sp.** — ♂, 22 mm.; ♀, 21 mm. Face dark ferruginous. Palpus ferruginous fuscous, not pale at base below. Antenna yellowish. Wings brownish grey, mixed with some ferruginous and fuscous scales. Forewing with two large fuscous or blackish spots on costa at one-third and two-thirds; from the former runs the first line to inner margin at one-third, fine, indistinct, ferruginous, making a curve basad between the costal spot and M, thence slightly sinuate, dark-marked on M and SM^2; distally to the second spot, running from above R^1 to inner margin and following the same course as in *inconcisata*, is a second line, ferruginous, accompanied proximally by dark vein-spots and distally by a fine pale line, to which succeeds some diffuse fuscous clouding; a series of large dark fuscous spots between the veins from beyond five-sixths of costa to inner margin, following the curve of the second line; discal dot and marginal series distinct, but minute; fringe nearly concolorous with wing, partly darkened in inner half; hindwing weakly marked, a light fuscous line just beyond middle, followed distally by the beginning of a second at inner margin; faint traces of a series of dark spots between this and distal margin; cell-spot and marginal series minute. Under surface very weakly marked, with faint traces of cell-spot, postmedial line and subterminal dark spots on both wings. Victoria. Type (♂, Gisborne, 18 Feb. 1894) in coll. G. Lyell. Superficially resembling, in an extraordinary degree, *inconcisata*, Walker; differing in browner tone, smaller cell-spot, absence of white on palpus below, and in the venation.

3. *E. hypenaria* (Guenée). — **Pl. I, Fig. 8.** — S. E. Australia to Tasmania (1).
Panagra hypenaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 128 (1858).
Hemagalma inspersa, Felder, Reise Novara, Lep. Het. t. 129, f. 19 (1875) (ab.).
Epidesmia hypenaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1163 (1890).

4. *E. tryxaria* (Guenée). — S.E. Australia to Tasmania.
Panagra tryxaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 128 (1858).
Epidesmia tryxaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1164 (1890).

5. *E. reservata* (Walker). — Queensland, New Guinea.
Panagra reservata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 996 (1861).
Epidesmia reservata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1166 (1890).

6. *E. perfabricata* (Walker). — S. E. to E. Australia.
Panagra perfabricata, Walker, List Lep. Ins Brit. Mus. Vol. 23, p. 996 (1861).
Epidesmia perfabricata, Meyrick, Proc. Linn. Soc N. S. Wales (2), Vol. 4, p. 1165 (1890).

7. *E. transcissata* (Walker). — Victoria.
Phrataria transcissata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1742 (1862).
Epidesmia transcissata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1161 (1890).

8. *E. replicataria* (Walker). — S. E. Australia.
Phrataria replicataria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1700 (1866).
Epidesmia replicataria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1161 (1890).

9. *E. oxyderces*, Meyrick. — New South Wales.
Epidesmia oxyderces, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1165 (1890).

10. *E. brachygrammella*, Lower. — Victoria.
Epidesmia brachygrammella, Lower, Trans. Roy. Soc. S. Austral. Vol. 17, p. 287 (1893).

11. *E. phaedropa*, Lower. — Queensland.
Epidesmia phaedropa, Lower, Trans. Roy. Soc. S. Austral. Vol. 17, p. 287 (1893).

12. *E. thermistis*, Lower. — Australia.
Epidesmia thermistis, Lower, Trans Roy. Soc. S. Austral. Vol. 18, p. 81 (1894).

13. **E. cygnea, nov. sp.** (2), Prout. — **Pl. I, Fig. 17.** — West Australia.

24. Genus SATRAPARCHIS, Meyrick

Satraparchis. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1158 (1890).

Characters. — Face smooth. Palpus rather long, rostriform, rough-scaled. Tongue developed.

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(1) One from « New Zealand » in coll. Br. Mus., presented by Sinclair, R. N., must have been an accidental importation, or possibly the locality was erroneously given.

(2) **Epidesmia cygnea, nov. sp.** — ♀, 29 mm. Face ferruginous, not tufted. Palpus moderate, ferruginous. Antenna yellowish. Forewing broad, triangular, smooth-margined, costa arched at base, then straight, apical angle pronounced, but not produced, distal margin faintly convex: fuscous grey, closely irrorated with whitish and darker fuscous; a difluse, pale yellowish shade (about 1 mm. in width) from SC at one-fourth to inner margin at nearly one-third, slightly oblique outwards to M, thence nearly perpendicular; a rather large, round, blackish cell-spot; a straight, pale yellowish line from close to costa at five-sixths to inner margin at nearly four-fifths accompanied distally by a fine ferruginous line; behind this the dark fuscous irroration is somewhat intensified, and there follows a row of obscure blackish dots between the veins; terminal black dots distinct, placed, between the veins; fringe lighter than wing, with slight yellowish gloss. Hindwing with distal margin gently convex, apex scarcely at all produced, rounded; light-grey, irrorated with fuscous; cell-spot small, not very distinct; a fuscous postmedial line running obliquely from inner margin at three-fourths to R^1 at one-third beyond cell; marginal dots and fringe as in forewing. Under surface light-grey, irrorated with fuscous, particularly towards costa of forewing and throughout hindwing; discal dot on hindwing distinct, postmedial line also distinct and reaching to costa. Waroona, Swan River, W. A., 2 Aug., 1907 (G. F. Berthoud). Type in coll. G. Lyell. Somewhat aberrant for an *Epidesmia*, the palpus only surpassing the head by about one length, and the apices of the wings not being produced. Venation and other points of structure agree. The entire habitus seems distinct from *Taxeotis*, but the discovery of the ♂ will be of considerable interest.

Antenna in ♂ unipectinate, towards apex simple, in ♀ simply pubescent. Thorax slightly hairy beneath. Femora glabrous. Hindtibia with all spurs, the terminal pair shorter. Wing-expanse 30-33 mm. Wings ample, margins entire, apices gently rounded. Frenulum present. Forewing with cell one-half, SC^{1-2} stalked, their stalk anastomosing with that of SC^{3-4} just beyond SC^5, SC^{3-5} stalked from close to R^1, radials normal, M^1 connate with or closely approximated to R^3; hindwing with cell rather short, discocellulars slightly oblique, vein C rather shortly approximated to SC towards middle, leaving the « basal cell » (between C and SC) rather large, SC^2 short-stalked with R^1, radials normal, M^1 connate or very short-stalked with R^3.

Early stages unknown.

A small genus, evidently an offshoot from *Epidesmia*, and hardly differing materially except in the forewing venation.

Type of the genus : *Satraparchis bijugata* (Walker) = *Panagra bijugata*, Walker (1890).

Geographical distribution of species. — Australian.

1. *S. bijugata* (Walker). Australia.

Panagra bijugata, Walker, List Lep. Ins. Brit. Mus. Vol. 26 p. 1663 (1862).
Melanippe teliferata, Walker, ibidem, p. 1712 (1862).
Satraparchis bijugata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1158 (1890).

Note. — « *Satraparchis* (?) » *macrocosma*, Lower, *Proc. Linn. Soc. N. S. Wales*, Vol. 24, p. 85 (1899) belongs to the subfamily *Geometrinae*.

25. Genus AFROPHYLA, Warren

Afrophyla. Warren, Novit. Zool. Vol. 2, p. 83 (1895).

Characters. — Face with appressed scales, sloping gently, thus slightly prominent below. Palpus rather short, second joint rough-scaled, third joint minute. Tongue developed. Antenna moderate, in ♂ bipectinate to about five-sixths, with rather long, well-ciliated pectinations (33 pairs, according to Snellen), in ♀ simply pubescent. Thorax slightly hairy beneath. Femora glabrous. Hindtibia with all spurs present. Abdomen rather slender. Wing-expanse 27-36 mm. Frenulum present. Forewing with costa gently arched, apex acute (especially in the ♀), distal margin rounded, not very oblique, cell about one-half, C free, SC^1 arising far from end of cell, anastomosing for a greater or less distance (1) with stalk of SC^{2-5} to form a narrow areole, SC^{2-5} stalked from well before apex of cell, radials normal, M^1 separate from R^3; hindwing with apex rounded, distal margin faintly waved, and a little prominent at R^3, cell one-half, C closely approximated to SC to near one-half of cell, occasionally (two ♂ from « West Africa » in Oxford Museum) anastomosing, thence rather rapidly diverging, SC^2 short-stalked or connate with R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

A somewhat isolated genus, possibly misplaced in this subfamily, in spite of a slight superficial agreement in some characters with the Australian genera which precede it. It is not impossible its real affinities are with *Palaeaspilates*, which we treat as an aberrant member of the *Acidaliinae*.

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(1) In the specimens which we have examined the anastomosis is rather short to moderate (variable) SC^4 again quitting the common stalk before SC^5, or at latest (one specimen) opposite thereto; in Snellen's apparently careful figure (*Tijdschr. v. Ent.* Vol. 29, t. 6, f. 4) SC^4 anastomoses to *beyond* separation of SC^5.

Type of the genus : *Afrophyla vethi* (Snellen) = *Panagra vethi*, Snellen = *Afrophyla dichordata*, Warren (1895).

Geographical distribution of species. — Æthiopian.

1. *A. vethi* (Snellen). Benguela to Kilima-Njaro.
Panagra vethi, Snellen, Tijdschr. v. Ent. Vol. 29, p. 139, t. 6, f. 1-9 (1886).
Afrophyla dichordata, Warren, Novit. Zool. Vol. 2, p. 83 (1895) (nov. syn.).

26. Genus SYSTATICA, Turner

Systatica. Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 229 (1904); Lower, ibidem, Vol. 29, p. 179 (1905).

Characters. — Face smooth. Palpus ascending, reaching vertex, densely haired, terminal joint concealed. Tongue well developed. Antenna in ♂ (? in ♀ also) with a single row of pectinations on outer side, apical one-sixth simple. Legs smooth. Posterior and middle tarsi with a few spinules. Wing-expanse 55 mm. Forewing with costa rather strongly arched, distal margin rounded, oblique, C free, $SC^{1\,2}$ stalked, SC^2 closely approximated to $SC^{3\text{-}4}$ but not connected, $SC^{3\text{-}5}$ stalked; hindwing with SC^2 separate from R^1 (Turner and Lower).

Early stages unknown.

« This genus forms a connecting link between *Epidesmia* and *Monoctenia* » (Turner).

Type of the genus : *Systatica xanthastis* (Lower) = *Monoctenia* (?) *xanthastis*, Lower (1904).

Geographical distribution of species. — Queensland.

1. *S. xanthastis* (Lower). Queensland.
Monoctenia (?) *xanthastis*, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 85 (1894).
Systatica xanthastis, Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 229 (1904).

27. Genus MONOCTENIA, Guenée

Monoctenia. Guenée, Spec. Gén. Lép. Vol. 9, p. 183 (1858).

Characters. — Face somewhat protuberant, densely scaled, but without strong tuft below; forehead rather prominent. Palpus moderate, second joint clothed with dense projecting scales, terminal joint moderate, smoother-scaled, subovate. Tongue present. Antenna in ♂ unipectinate, with very long branches, which rapidly decrease in length, apex merely dentate, ciliated; in ♀ subdentate, pubescent, with minute paired bristles. Thorax stout, densely hairy beneath. Femora hairy. Hindtibia not dilated, all spurs present, approximated. Tarsi strongly spinulose. Abdomen stout. Wing expanse 56-82 mm. Wings strong, very thickly scaled. Frenulum present. Forewing with costa nearly straight, apex acute, but not subfalcate, distal margin very faintly crenulate, nearly vertical from apex to R^2, thence rather strongly oblique, cell scarcely over one-half, but considerably produced apically, SC^1 free, $SC^{2\text{-}3}$ long-stalked from long before end of cell, SC^3 anastomosing with SC^4, $SC^{4\text{-}5}$ stalked from shortly before end of cell, radials normal. M^1 separate

Fig. 4

Forefemur and tibia of *Monoctenia falernaria*, Guenée (hair-tuft partly removed to expose the tibial claw).

from R^3; hindwing with distal margin weakly convex, very faintly crenulate, cell about one-half, DC^3 very deeply inbent, C approximated (yet not closely) to cell from near base to about middle, SC^2 separate from R^1, R^2 from much nearer to R^1 than to R^3, slightly curved near its origin, M^1 separate from R^3.

Early stages apparently undescribed.

The type of this genus is a species standing somewhat by itself, except for its close relationship with *smerintharia* and probably two of Lower's species which are unknown to us. Although we may not yet have found the best characters to emphasize in differentiating it, it would certainly be premature to sink to it, as Meyrick has done, Guenée's *typical* genus of the subfamily (*Œnochroma*). Had it been necessary to fuse the two, *Œnochroma* would have been the better name to adopt under the circumstances, but we would point out that the face, though somewhat protuberant, is less oblique and less tufted than in typical *Œnochroma*, that the ♂ antennal pectinations are quite abnormally long, the hindtibial spurs differently placed, the hindwing ampler than in most *Œnochroma* species, with C less closely approximated to SC and with DC^3 and R^2 different, while the scheme of pattern on the underside is simpler, etc.

Type of the genus : *Monoctenia falernaria*, Guenée (1858).

Geographical distribution of species — Australian.

1. *M. falernaria*, Guenée. — S. E. Australia with Tasmania.
   Monoctenia falernaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 184 (1858).
   Monoctenia fraternaria, Guenée, ibidem, t. 7, f. 3 (1858).
2. *M. smerintharia*, Felder. — S. E. Australia.
   Monoctenia smerintharia, Felder, Reise Novara, Lep. Het. t. 124, f. 18, 19 (1875).
3. *M. eximia*, Lower (huj. gen. ?). — S. Australia.
   Monoctenia eximia, Lower, Trans. Roy. Soc. S. Austral. Vol. 15, p. 7 (1892).
4. *M. calladelpha*, Lower (huj. gen. ?). — S. Australia.
   Monoctenia calladelpha, Lower, Trans. Roy. Soc. S. Austral. Vol. 15, p. 7 (1892).

28. Genus ŒNOCHROMA, Guenée

Œnochroma. Guenée, Spec. Gén. Lép. Vol. 9, p. 184 (1858).
Diamuna. Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 289 (1860) (nec Walker, 1857).
Balliace. Walker, ibidem, p. 289 (1860).
Monoctenia (part.). Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1204 (1890) (nec Guenée).
Monoctophora. Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 144 (1900) (nov. syn.).
Galanageia. Lucas, ibidem, p. 147 (1900) (nov. syn.) (fide Turner in litt.).

Characters. — Face sloping, protuberant below, densely scaled, more or less tufted below. Palpus moderate, rough-haired, third joint distinct, smooth. Tongue developed. Antenna moderate, in ♂ strongly unipectinate, with apex simple, in ♀ rather thick, lamellate, finely pubescent, in the type-species with minute paired bristles. Thorax densely hairy beneath. Femora more or less hairy. Hindtibia not dilated, all spurs present, normally placed, not long. Tarsi spinulose. Wing-expanse 24-59 mm. Wings thickly scaled, margins usually entire, sometimes crenulate. Frenulum present. Forewing with costa usually almost straight, apex subfalcate, distal margin strongly oblique, at least from R^2 to inner margin, cell about one-half, but produced apically, SC^1 free, SC^{2-3} stalked from before apex of cell (1), SC^3 anastomosing with SC^4, SC^{4-5} stalked from apex of cell, radials normal, M^1 approximated to R^3;

(1) Occasionally the base of SC^3 is obsolete, its point of origin being indicated only by a slight bend in SC^2 or even by point-contact or very brief anastomosis of SC^2 with SC^4; in these cases SC^3 actually arises out of SC^4.

hindwing small, with distal margin usually more or less straight, cell one-half, discocellulars somewhat variable, but never so deeply incurved as in *Monoctenia*, C closely approximated to SC to or to beyond one-half of cell, SC^2 approximated to or connate with R^1, exceptionally very short-stalked, R^2 midway between R^1 and R^3 or sometimes from somewhat nearer R^1 (only in *postcarneata* much nearer), M^1 closely approximated to R^3, perhaps ocasionally connate.

Larva. — Apparently known to individual collectors in the case of several species, but hardly described. That of the type-species has three pairs of anal claspers, two hard black pointed hornlike processes on the metathorax, and two (smaller) conical yellow ones on the eighth abdominal; its form is somewhat elongate cylindrical, tapering a little anteriorly. (Guenée, *Ann. Soc. Ent. Fr.* (4), Vol. 4, t. 1, f. 1; Guest, *Trans. Roy. Soc. S. Austral.* Vol. 9, p. 132).

Pupa. — Apparently undescribed.

Some species apparently referable to this genus are unknown to us except from the descriptions. Those that have been studied agree fairly well in essential structure and general facies, though some of the divergences may not be altogether insignificant. We figure the foretibia of *polyspila* (Fig. 5) which shows a strong apical spine that only occurs besides, among the species known to us, in *privata*.

Fig. 5

Foreleg of *Œnochroma polyspila*, Lower.

Type of the genus : *Œnochroma vinaria*, Guenée (1858).

Geographical distribution of species. — Australian.

1. *Œ. vinaria*, Guenée. — Australia, except the west.
   Œnochroma vinaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 185, t. 7, f. 2 (1858),
   Monoctenia decora, Walker, Char. undescr. Lep. p. 76 (1869) (var.) (fide Turner et Lyell, in litt.).
   Monoctenia vinaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1206 (1890).
2. *Œ. subustaria* (Walker). — Queensland.
   Phallaria subustaria, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 283 (1860).
   Monoctenia subustaria, part. (?), Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1209 (1890).
   Monoctophora caprina, Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 145 (1900) (nov. syn.).
3. *Œ. privata* (Walker). — New South Wales.
   Hypographa privata, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 286 (1860).
   Monoctenia hypotaeniaria, Guenée, Ann. Soc. Ent. Fr. (4), Vol. 4, p. 15 (1864).
   Monoctenia subustaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1209 (1890) (nec Walker).
4. *Œ. ochripennata* (Walker). — West Australia.
   Phallaria (?) *ochripennata*, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 284 (1860).
   Diæmuna gastropacharia, Walker, ibidem, p. 289 (1860).
   Monoctenia ochripennata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1205 (1890).
5. *Œ. vetustaria* (Walker). — Australia.
   Balliace vetustaria, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 290 (1860).
   Monoctenia digglesaria, Guenée, Ann. Soc. Ent. Fr. (4), Vol. 4, p. 15 (1864) (nov. syn.)
6. *Œ. orthodesma* (Lower). — Queensland.
   Monoctenia orthodesma, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 84 (1895).

Monoctena pallidula, Lucas, Proc. Roy. Soc. Queensl. Vol. 13, p. 69 (1898) (nov. syn.) (1).
Œnochroma pallida, Warren, Novit. Zool. Vol. 5, p. 231 (1898) (nov. syn.).
Monoctenia vinaria, form. *pallida*, Swinhoe, Trans. Ent. Soc. Lond. p. 640 (1902).

7. *Œ. cycnoptera* (Lower). — S. Australia, ? W. Australia.
Monoctenia cycnoptera, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 84 (1895).
? *Œnochroma simplex*, Warren, Novit. Zool. Vol. 4, p. 206 (1897) (var. ?).

8. *Œ. decolorata*, Warren. — Queensland.
Œnochroma decolorata, Warren, Novit. Zool. Vol. 3, p. 354 (1896).

9. *Œ. polyspila* (Lower). — **Pl. I, Fig. 9.** — Queensland.
Monoctenia polyspila, Lower, Proc. Linn. Soc. N. S. Wales, Vol. 22, p. 263 (1897).
Œnochroma guttilinea, Warren, Novit. Zool. Vol. 10, p. 260 (1903) (nov. syn.).

10. *Œ. phyllomorpha* (Lower). — S. E. to E. Australia.
Monoctenia phyllomorpha, Lower, Proc. Linn. Soc. N. S. Wales, Vol. 24, p. 86 (1899).
Monoctophora stillans, Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 144 (1900) (nov. syn.).
Monoctenia subcarnea, Warren, Novit. Zool. Vol. 9, p. 348 (1902) (nov. syn.).

11. *Œ. quadrigramma* (Lucas) (huj. gen., fide Turner in litt.). — Queensland.
Galanageia quadrigramma, Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 148 (1900).

12. *Œ. niphosema* (huj. gen. ?) (Lower). — West Australia.
Monoctenia niphosema, Lower, Trans. Roy. Soc. S. Austral. Vol. 32, p. 113 (1908).

13. **Œ. erubescens, nov. sp.** (2) (Lower, M S.), Prout. — New South Wales.

14. **Œ. infantilis, nov. sp.** (3), Prout. — Australia.

15. **Œ. postcarneata, nov. sp.** (4), Prout. — W. Australia.

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(1) Lower's description of his *orthodesma* is inadequate; our determination of it as = *pallidula*, Lucas (about which no doubt exists) is founded on a specimen in coll. E. Meyrick.

(2) **Œnochroma erubescens, nov. sp.** — ♀, 50 mm. Face slightly oblique, somewhat tufted. Thorax and abdomen robust. Face and dorsum of thorax fleshy ochreous, of abdomen more flesh-coloured, underside of palpus, pectus and underside of abdomen whitish ochreous to whitish flesh colour. Wings fleshy ochreous, forewing traversed by a nearly straight line from costa close to apex to inner margin just before two-thirds, brownish red, very faint from costa nearly to SC^5, thence becoming very distinct, accompanied proximally by a pale yellowish line; ground-colour somewhat yellower before the lines, somewhat pinker distally. Fringe reddish. Hindwing similar, the costal area whitish, the lines distinct from R^4 to inner margin at just beyond one-half, parallel to distal margin. Under surface paler, especially the costal and posterior parts of forewing and the basal and inner-marginal parts of hindwing; a maroon-red blotch distally to M^2 of forewing, from about one-third to two-thirds of that vein, emitting two less well-defined, diffuse marks of the same colour from its extremities to M^1. Related to *vinaria*, which it resembles in shape, but with forewing a little broader and hindwing less cut off at apex, venation closely as in that species. Manly, coast of New South Wales, 26 March, 1906. Type in coll. G. Lyell. We have adopted the name supplied by Mr. Lyell, but can find no evidence of previous publication of it.

(3) **Œnochroma infantilis, nov. sp.** — ♂, 24 mm. Face roundly protuberant, scarcely rough-scaled above, with small projecting tuft below. Antennal pectinations rather long. Face fuscous. Palpus and antennal shaft whitish, mixed with rosy red. Fore and middle legs rosy red on outer side. Thorax pale whitish green, abdomen whitish. Forewing with apex acute, but not subfalcate, distal margin nearly straight, not very oblique, the wing therefore broader than in typical *Œnochroma*; very pale green, almost white; first line at about one-third, nearly obsolete, faintly traceable in clearer white between M and SM; second line white, from close to apex, obsolescent and slighty curved to R^4, straight and rather more distinct from R^4 to inner margin at about two-thirds, followed by another, but nearly obsolete, straight whitish line; distal margin narrowly white, shading into the greener tint proximally; fringe deep rosy. Hindwing with distal margin straight, angles rounded; anterior (costal) half whitish, posterior (inner-marginal) coloured as in forewing, an indistinct whitish postmedial line on this half at nearly two-thirds, followed by a scarcely traceable similar line; fringe rosy between R^4 and SM^2. Under surface of forewing nearly white, of hindwing white, the lines obsolete, fringes as above. « Almaden, Chillaga River, March, 1908 » (F. P. Dodd). Type in coll. G. Lyell. Not an absolutely typical *Œnochroma*, the frons being somewhat less rough-scaled, and the forewing somewhat differently shaped; but certainly does not demand a separate genus, both these features being also found in *phyllomorpha*, to which it is perhaps rather close allied, in spite of the colour difference. The venation is virtually normal; SC^2 of forewing anastomoses very shortly with SC^4.

(4) **Œnochroma postcarneata, nov. sp.** — ♀, 25 mm. Face and thorax concolorous with forewing, pectus and palpus somewhat lighter, the latter with some admixture of pink scales. Foreleg pink-tinged on inner side. Forewing moderately broad, costa somewhat concave except at extremities, apex acute, distal margin somewhat gibbous except below apex; forewing somewhat ochreous light-brown (possibly a little discoloured, as condition is not quite perfect), entirely without markings. Hindwing with distal margin slightly crenulate, basal three-fifths white, marginal two-fifths pink, the pink portion bounded proximally by a sinuous grey line from R^5 to M^1 (faintly traceable a little further in each direction), and containing a somewhat irregular long-oval dark grey blotch from R^1 to M^2; a small light-brown blotch (quite ill-defined) at anal angle; fringe white, spotted with dark grey at the vein-ends. Underside of forewing nearly white, distally pinkish; of hindwing whitish, with the dark grey markings darker than above (fuscous), the ovate blotch surrounded by a diffuse brownish shade, hardly tinged with pink and not reaching to the wing-margins, fringe as above but the dark spots scarcely so pronounced. Venation of forewing normal, SC^3 out of SC^2, but SC^2 here so close to SC^4 as almost to suggest point-contact of these two instead of origin of a separate vein, C of hindwing approximated to SC to rather near end of cell, SC^2 short-stalked with R^1, R^2 from much above middle of discocellulars, DC^3 incurved. Perth, W. A. (C. M. Worsfold). Type in coll. Br. Mus.

29. Genus ANTICTENIA, nov. gen., Prout

Anticteria, nov. gen., Prout.

Characters. — Face not protuberant, with appressed scales. Palpus short, rough-scaled, third joint small, smoother-scaled. Tongue developed. Antenna about one-half, in the ♂ very unequally bipectinate, the one series (anterior) only about as long as width of shaft, subclavate, the other (posterior) long, apex merely dentate; in ♀ with a single series of strong serrations (or long teeth) and minute ciliation. Thorax densely hairy beneath. Femora hairy. Hindtibia not dilated, with all spurs present, closely approximated. Tarsi strongly spinulose. Abdomen moderately robust. Wing-expanse 34-45 mm. Frenulum present. Forewing long and narrow, costa very slightly concave to near apex, apex prominent, distal margin nearly straight from apex to R^2, thence very oblique, cell about one-half, produced towards apex, SC^1 free, SC^{2-3} stalked from near end of cell, touching SC^4 at a point, SC^3 continuing anastomosed therewith for some distance (1), SC^{4-5} from apex of cell, radials normal, M^1 approximated to R^3; hindwing with cell scarcely one-half, discocellulars inangled, C approximated to SC rather shortly towards middle of cell, SC^2 very short-stalked with R^1, radials normal, M^1 approximated to R^3.

Early stages unknown.

Allied to *Œnochroma*, but differing in so many characters (face, palpus, antenna, etc.), that it is unavoidable to erect for it a separate genus.

Type of the genus : *Anticteria punctunculus* (Lucas) = *Monoctenia punctunculus*, Lucas.

Geographical distribution of species. — E. Australian.

1. *A. punctunculus* (Lucas). Queensland.

Monoctenia punctunculus, Lucas, Proc. Roy. Soc. Queensl. Vol. 8, p. 84 (1892).
Œnochroma leucospila, Warren, Novit. Zool. Vol. 5, p. 230 (1898).

30. Genus PHALLARIA, Guenée

Phallaria. Guenée, Spec. Gén. Lép. Vol. 9, p. 186 (1858).

Characters. — Face protuberant, densely rough-scaled. Palpus moderate, strongly rough-scaled, third joint rather long and strong, cylindrical. Tongue developed. Antenna moderate, in ♂ bipectinate to apex, in ♀ with double series of serrations, each tooth with short terminal bristle. Thorax stout, densely hairy beneath. Femora hairy. Hindtibia not dilated, with four approximated spurs. Tarsi strongly spinulose. Abdomen stout. Wing-expanse 62-78 mm. Frenulum present. Forewing with costa rather straight, apex acutely produced, distal margin concave from apex to R^1, thence convex, cell over one-half, cell-spot hyaline, SC^1 free, SC^{2-3} stalked, SC^3 anastomosing with SC^4, SC^{4-5} stalked from well before apex of cell, radials normal, M^1 well removed from R^3; hindwing with distal margin moderately rounded, faintly waved, cell one-half, cell-spot hyaline, C approximated (though not closely) to SC for a distance in middle part of cell, gradually diverging, SC^2 separate from R^1, R^2 from slightly nearer to R^1 than to R^3, M^1 well removed from R^3.

Egg. — Dull greenish white, not described.

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(1) Or : SC^2 from near end of cell, anastomosing at a point with the stalk of SC^{3-5}; a superficially simpler interpretation, but false to the analogies of the genus.

Larva. — Stout, head flat, slightly retracted, no additional prolegs, a curved horn on ninth abdomen (Anderson, *Vict. Nat.* Vol. 19, p. 62).

Pupa. — In a loose cocoon of moss and earth, not described.

Related to *Monoctenia*, differing little in essential structure, beyond the secondary sexual character of the ♂ antenna. The abdomen is more pointed anally, especially in the ♂, the palpus somewhat stronger, subascending, the tarsal spines perhaps stronger, while the discocellulars and R^2 of the hindwing are more normal.

Type of the genus : *Phallaria ophiusaria*, Guenée (1858).

Geographical distribution of species. — Australian.

1. *P. ophiusaria*, Guenée. S. to E. Australia.

Phallaria ophiusaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 186 (1858).
Œnochroma quaternaria, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, p. 84, t. 95, f 541 (1858).
Smerinthus (?) *wayii*, Tepper, Trans. Roy. Soc. S. Austral. Vol. 5, p. 29 (1882).
Colussa (?) *wayii*, Kirby, Cat. Lep. Het. Vol. 1, p. 806 (1892).
Phallaria quaternaria, Swinhoe, Lep. Het. Oxf. Mus. Vol. 2, p. 318 (1900).

31. Genus CARTHÆA, Walker

Carthæa. Walker, List Lep. Ins. Brit. Mus. Vol. 14, p. 1314 (1858).

Characters. — Face protuberant, very densely clothed with shaggy hair. Palpus rather long, densely hairy, third joint long, cylindrical, smooth-scaled. Tongue developed. Antenna in ♂ strongly bipectinate, in ♀ subserrate, with short paired bristles. Thorax stout, densely hairy. Femora densely hairy. Tibiæ long-scaled, foretibial claw concealed by long strong hair-pencil, hindtibia with hair-pencil, four long spurs in both sexes. Tarsi strongly spinulose. Abdomen robust, strongly hairy. Wing-expanse 83-91 mm. Wings ample, strong, densely scaled, the scaling of hindwing and underside much mixed with hair. Frenulum present. Forewing with costal und distal margins smooth, gently arched, apex squared, cell rather over one-half, SC^1 free, SC^{2-3} long-stalked, SC^3 well removed from SC^4, SC^{4-5} stalked from well before apex of cell, radials normal. M^1 from well before R^3; hindwing with distal margin somewhat rounded, very slightly produced apically, cell slightly over one-half, costal area ample, C somewhat (though not closely) approximated to SC to one-half of cell, thence gradually diverging, SC^2 well separate from R^1, radials normal, M^1 well separate from R^3.

Early stages unknown.

Type of the genus : *Carthaea saturnioides*, Walker (1858).

Geographical distribution of species. — Australian.

1. *C. saturnioides*, Walker. W. Australia.

Carthaea saturnioides, Walker, List Lep. Ins. Brit. Mus. Vol. 14, p. 1314 (1858).

32. Genus GASTROPHORA, Guenée

Gastrophora. Guenée, Spec. Gén. Lép. Vol. 9, p. 187 (1858).

Characters. — Face somewhat protuberant, moderately rough-scaled. Palpus moderate in ♂, short in ♀, rough-scaled, third joint short. Tongue present. Antenna moderate, in ♂ strongly bipectinate almost to apex, in ♀ subpectinate, the teeth shortly ciliated, each surmounted by a pair of bristles.

Thorax stout, densely hairy beneath. Femora hairy. Hindtibia not dilated, all spurs present. Tarsi with some short scattered spinules. Abdomen long and robust, particularly in ♀. Wing-expanse 52-65 mm. (♀); 69-94 mm. (♀). Wings densely scaled. Frenulum developed in ♂, wanting in ♀. Forewing with apex acute, minutely subfalcate, especially in ♀, costa very gently arched in ♂, very strongly in ♀, distal margin smooth in ♂, slightly sinuate in ♀, cell somewhat produced apically, SC^1 free, SC^{2-3} stalked from before apex of cell, SC^3 anastomosing with SC^4, SC^{4-5} stalked from apex of cell, R^1 connate or short-stalked with SC^{4-5}, M^1 separate from R^3; hindwing somewhat elongate in ♀, C approximated to SC towards middle of cell, SC^2 stalked with R^1, discocellulars strongly inbent, R^2 from above middle, M^1 separate from R^3 (**Pl. 2, Fig. 3**).

Larva. — Rather stout, protectively assimilated to the bark on which it rests, no additional prolegs; the figure shows two small subdorsal protuberances (? on the fourth and fifth abdominals) and a small hump near the anal end (? on the ninth abdominal) (Anderson, *Vict. Nat.* Vol. 19, p. 59).

Type of the genus : *Gastrophora henricaria*, Guenée (1858).

Geographical distribution of species. — Australian.

1. *G. henricaria*, Guenée. — **Pl. 1, Fig. 7.** S. to E. Australia.
   Gastrophora henricaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 187, t. 21, f. 4 (1858).

33. Genus HOMOSPORA, Turner

Homospora. Turner, Trans. Roy. Soc. S. Austral. Vol. 28, p. 229 (1904).

Characters. — Face with strong obtuse, conical chitinous projection. Palpus moderate, subascending, rough-scaled, third joint very short. Tongue developed. Antenna rather short, bipectinate nearly to the apex, the pectinations very short in the ♀ (scarcely more than long serrations). Thorax stout, densely hairy beneath. Femora hairy. Hindtibia with terminal spurs only. Tarsi scarcely spinulose. Abdomen moderately robust. Wing-expanse 42-50 mm. Frenulum present. Forewing somewhat elongate, costa little arched, except towards apex, apex slightly produced, distal margin slightly sinuate below apex, otherwise bowed, oblique, cell about one-half, SC^1 free, SC^{2-3} stalked, SC^3 anastomosing shortly with SC^4, SC^{4-5} stalked from near end of cell, radials normal, M^1 separate from R^3; hindwing not broad, distal margin rounded, cell somewhat over one-half, C approximated to SC to one-half of cell, SC^2 connate wit R^1, R^2 from slightly nearer to R^1 than to R^3, M^1 separate from R^3.

Early stages unknown.

Type of the genus : *Homospora rhodoscopa* (Lower) = *Onychodes rhodoscopa* Lower = *Homospora procrita*, Turner (1904).

Geographical distribution of species. — Australian.

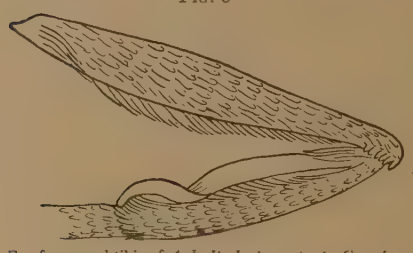
1. *H. rhodoscopa* (Lower). Queensland.
   Onychodes (?) *rhodoscopa*, Lower, Trans. Roy. Soc. S. Austral. Vol. 26, p. 228 (1902).
   Homospora procrita, Turner, ibidem, Vol. 28, p. 230 (1904).
   Homospora rhodoscopa, Lower, ibidem, Vol. 29, p. 178 (1905).

34. Genus ARHODIA, Guenée

Arhodia. Guenée, Spec. Gén. Lép. Vol. 9, p. 185 (1858).
Nigasa. Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 287 (1860) (nec Walker, 1855).
Arrhodia. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1201 (1890).

Characters. — Face densely scaled. Palpus rather short, especially in ♀, rough-scaled, third joint small, blunt. Tongue developed. Antenna about one-half, in ♂ strongly bipectinate to apex, in ♀ minutely bipectinate (long serrate), each serration surmounted by two very short bristles. Thorax stout, densely hairy beneath. Femora hairy. Foretibial claw terminating in a twisted hook-like process (**Fig. 6**), hindtibia not dilated, with terminal spurs only. Tarsi slightly spinulose. Abdomen moderately stout, especially in ♀. Wing-expanse 30-57 mm. (♂), 50-72 mm. (♀). Frenulum present in both sexes. Forewing with costa slightly arched in ♂, strongly in ♀, apex scarcely produced, distal margin faintly sinuate, in ♀ very oblique, cell produced apically, SC^1 free, SC^2 free, SC^{3-5} stalked(1) from shortly before apex of cell, radials normal, M^1 separate from R^3; hindwing with distal margin rounded, cell about one-half, C approximated somewhat to SC towards middle of cell, SC^2 separate from R^1, radials normal, M^1 separate from R^3.

FIG. 6



Forefemur and tibia of *Arhodia lasiocamparia*, Guenée (hair-tuft partly removed to expose the tibial claw).

LARVA. — With a rudimentary pair of prolegs on the fifth abdominal, not used in walking; smooth, on the back of the ninth (?) abdominal a projecting semicircular disk (Guest, *Trans. Roy. Soc. S. Austral.* Vol. 9, p. 132).

Akin to *Gastrophora*, but somewhat less robust, and differing essentially in the hindtibial armature, etc.

Type of the genus : *Arhodia lasiocamparia,* Guenée (1858).

Geographical distribution of species. — Australian.

1. *A. lasiocamparia*, Guenée. — S. and E. Australia, with Tasmania.
   Arhodia lasiocamparia, Guenée, Spec. Gén. Lép. Vol. 9, p. 186 (1858).
   Arhodia retractaria, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 282 (1860) (ab.; an var. ?).
   Nigasa subpurpurea, Walker, ibidem, p. 287 (1860).
   Arhodia semirosea, Walker, Trans. Ent. Soc Lond. (3), Vol. 1, p. 267 (ab.; ead. ac. *retractaria*, Walker).
   Arhodia retractaria, ab. *carnea*, Warren, Novit. Zool. Vol. 12, p. 9 (1905) (ab. ? ; potius ad spec. seq. ?).
2. *A. ozora* (Swinhoe) (præc. var. ?) (huj. gen. certo). — West Australia.
   Monoctenia ozora, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 9, p. 167 (1902).

35. GENUS DINOPHALUS, NOV. GEN., PROUT

Dinophalus, nov. gen. Prout.

Characters. — Face with long horny projecting plate, rough-scaled laterally, and terminating in two strong points, the interspace roundly concave (somewhat as in *Ciampa*, but broader). Palpus moderate, stout, second joint rather rough-scaled, third joint strong. Tongue wanting (?). Antenna little over one-half, in ♂ unipectinate, with long, strongly-ciliated pectinations which decrease towards apex, and give place, at about four-fifths, to short teeth or serration. Thorax stout, hairy beneath,

(1) Probably through obsolesence of the base of SC^3, which in most allies springs out of SC^2.

though less densely than in *Hypographa*. Legs stout. Femora hairy. Hindtibia not dilated, median spurs wanting, terminals rather stout, the inner somewhat the longer. Tarsi spinulose; hindtarsus of ♂ with first joint dilated and hollewed, concealing a small comb of spines at proximal extremity, suggesting a stridulating organ. Abdomen long and rather stout. Wings narrow. Wing-expanse 27 mm. Frenulum developed. Forewing with costa nearly straight, faintly concave in inner half, slightly convex before apex, apex not acute, distal margin very oblique, strongly and irregularly crenulate, cell one-half, but strongly produced apically, SC^1 anastomosing strongly with C, SC^3 out of SC^2, anastomosing immediately with SC^4, SC^{4-5} stalked from apex of cell, R^2 from somewhat nearer to R^3 than to R^1, M^1 connate with R^3; hindwing with distal margin sinuate, especially before tornus, C anastomosing strongly with SC, SC^2 short-stalked with R^1, radials normal, M^1 connate with R^3. ♀ unknown.

Early stages unknown.

Related to *Hypographa* and especially to *Ophiographa*, but differing in the frontal armature, hindtarsus, shape of wings, etc.

Type of the genus : *Dinophalus cyanorrhaea* (Lower) = *Hypographa cyanorrhaea*, Lower.

Geographical distribution of species. — Australian.

1. *D. cyanorrhaea* (Lower) Queensland, ?? S.Australia.
Hypographa cyanorrhaea, Lower, Trans. Roy. Soc. S. Austral. Vol. 27, p. 191 (1903).

36. Genus OPHIOGRAPHA, nov. gen., Prout

Ophiographa, nov. gen. Prout.

Characters. — Face with strong rounded or elongate chitinous projection, more or less concealed by rough scales, but often terminating in a horny beak-like process below. Palpus moderate, densely hairy, third joint moderate, blunt. Tongue developed. Antenna moderately long, in ♂ unipectinate with rather long pectinations, in ♀ lamellate, nearly simple (?). Thorax stout, densely hairy beneath. Femora hairy. Hindtibia scarcely dilated, in ♂ with terminal spurs only, in ♀ sometimes, probably always, with all spurs, but insufficiently known. Tarsi strongly spinulose. Abdomen stout. Wing-expanse 27-31 mm. Frenulum present. Forewing with costa nearly straight, or very faintly concave towards middle, very slightly convex before apex, apex acute, distal margin deeply crenate (much less so in *dilutaria*) cell one-half, more or less produced apically, SC^1 anastomosing with C, SC^{2-3} stalked from before apex of cell, closely appressed to SC^1, SC^3 anastomosing with SC^4, SC^{4-5} stalked from close to apex of cell, radials normal, or R^2 very slightly below middle, M^1 from close to R^3; hindwing with distal margin deeply crenate (much less so in *dilutaria*), C anastomosing with SC in middle third of cell, SC^2 connate or very short-stalked with R^1, R^2 from slightly above middle of discocellulars, M^1 from close to R^3.

Early stages unknown.

Related to *Hypographa*, but differing in the frontal armature and the tibial spurring. The species that have hitherto been placed in *Hypographa* seem to be scarce, or retiring in their habits, and there has never been brought together sufficient material for an adequate study of them.

Type of the genus : *Ophiographa serpentaria* (Guenée) = *Hypographa serpentaria*, Guenée.

Geographical distribution of species. — Australian.

SECTION I. — Face terminating in long beak-like process below.

1. *O. serpentaria* (Guenée). S. E. Australia.
Hypographa serpentaria, Guenée, Ann. Soc. Ent. Fr. (4), Vol. 4, p. 16 (1864).
Eutelia undulifera, Walker, List Lep. Ins. Brit. Mus. Vol. 33, p. 824 (1865).
2. **O. macrophyes, nov. sp.** (1), Prout. West Australia.
3. *O. dilutaria* (Warren). West Australia.
Hypographa dilutaria, Warren, Novit. Zool. Vol. 10, p. 260 (1903).

SECTION II. — Face not terminating in beak-like process below.

4. *O. atmoscia* (Meyrick) (huj. gen. verisimiliter; ♂ ignot.). West Australia.
Hypographa atmoscia, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1213 (1890).
5. **O. drakei, nov. sp.** (2), Prout. Victoria.

37. GENUS LISSOCRASPEDA, NOV. GEN., PROUT

Lissocraspeda, nov. gen. Prout.

Characters. — Face strongly elongate-prominent, with tolerably appressed scales, and terminating in a pair of horny, pointed processes, tolerably approximated. Palpus moderate, reaching almost beyond the frontal projections, second joint shortly rough-scaled, third joint moderate. Tongue wanting(?). Antenna moderate, in ♂ unipectinate with long, rapidly-decreasing pectinations, apical one-fifth nearly simple. Thorax hairy beneath. Femora hairy. Hindtibia not dilated, with terminal spurs only. Tarsi strongly spinulose. Abdomen scarcely stout. Wing-expanse 25-30 mm. Wings not broad, moderately smooth-scaled. Frenulum present. Forewing with costa nearly straight, apex acute but not produced, distal margin oblique, scarcely waved, cell produced apically, SC^1 anastomosing with C, SC^{2-3} stalked, SC^3 anastomosing with SC^4, SC^{4-5} stalked from apex of cell, R^1 connate or very short-stalked with SC^{4-5}, R^2 somewhat nearer to R^3 than to R^1, M^1 approximated to R^3; hindwing with distal margin almost entire, rounded, sinuate before tornus, C anastomosing with SC to beyond one-half, SC^2 very short-stalked with R^1, R^2 normally placed, M^1 approximated to R^3.

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(1) **Ophiographa macrophyes, nov. sp.** — ♂, 28 mm. Abdomen long. Femora and tibiæ with dense tufts of whitish hair. Forewing grey, faintly tinged with brown, almost as in *serpentaria*: markings deep fuscous; some ill-defined markings in basal area; first line from costa at one-third to inner margin at two-fifths, making a very strong V-shaped bend outward below M; second line from costa at beyond two-thirds to inner margin at two-thirds, sinuate, making a strong inward bend between R^4 and R^3, and accompanied distally by a whitish line; in the median area, nearer to the second line, a diffuse shade making a strong curve behind cell-spot and then thickening into two irregular blotches in middle of wing and at inner margin; distally to the second line a series of seven large elongate patches bisected by veins SC^5 to SM^2, those on R^2 and M^2 shorter, that on R^2 narrow also; cell-spot rather large, elongate; marginal line as in *serpentaria*, fringe white between the veins. Hindwing with proximal half whitish, distal half grey, the latter with traces of transverse lines apparently as in *serpentaria*, but much less distinct, cell-spot fuscous, smaller and less distinct than in forewing. Underside of forewing weakly marked, the dark shade behind cell and the whitish line accompanying second line moderately expressed; underside of hindwing with very broad postmedial cloudy dark band, much as in *serpentaria*, but intersected by a wavy whitish line. Albany, W. A. (G. C. Shortbridge). Type in coll. Br. Mus.

(2) **Ophiographa drakei, nov. sp.** — ♂, ♀, 30-32 mm Face with long, horny, scaled prominence (longer than in *atmoscia*, but with shorter projecting hair-scales; its extremity less broadly obtuse, yet not prolonged into the horny beak-like point of Section I). Antenna nearly as in *serpentaria*, somewhat more slender. Abdomen long. Head, thorax and abdomen fuscous mingled with violet-whitish, abdomen ventrally paler than dorsally. Hindtibia in ♀ with all spurs present. Wings resembling in shape those of *atmoscia*, fuscous irrorated with violet-whitish. Forewing with ill-defined dark patch in cell near base; lines black; first line from before one-third of costa, oblique outwards nearly to M, almost inappreciably indented on M, curved inwards to SM, thence indistinct, making a strong bend outwards and reaching inner margin at about two-fifths; second line from three-fourths costa to two-thirds inner margin, making slight teeth outwards on SC^5, R^4, R^3, M^1 and M^2, a rather strong sinus behind cell and a smaller one between M^1 and M^2, also slightly sinuate inwards beyond M^2 and outwards again towards inner margin; first line preceded and second followed by broad, diffuse, deep fuscous shades or bands; a pale subterminal very faintly indicated, zigzag; a very faint fuscous « median shade » shortly preceding second line; a dark terminal line; discal spot obsolete. Hindwing slightly paler proximally than distally, a faint discal dot, a fine, indistinct, sinuate post-medial line, obscurely dark-shaded behind (especially at inner margin), a dark terminal line. Fringes of both wings pale proximally, darker distally. Under surface of forewing without markings; of hindwing pale, with a fuscous cloud occupying nearly the distal half, except at termen, a still darker, sinuate postmedial line discernible in the fuscous cloud. Beaconsfield, Victoria, 14 Nov. 1908. Type in coll. W. E. Drake, Beaconsfield. Two extremely worn specimens (1 ♂, 1 ♀), without exact locality, in coll. Br. Mus. Related to *atmoscia*, Meyrick, but differing markedly in the frons, in the course of first line and in the median shade; the latter in *atmoscia* is much straighter as well as much better developed.

Early stages unknown.

Another offshoot of *Hypographa*, differing from that genus in the entire wing-margins, the absence of median spurs on hindleg and in the frontal armature (double-pointed). The snout-like shape of the frons rather associates it with *Ophiographa atmoscia* and *O. drakei;* but from that genus and from *Dinophalus* it is readily distinguished by the wing-shape and the frontal armature; it lacks the long horny plate of the latter genus.

Type of the genus : *Lissocraspeda eremoea* (Lower) = *Hypographa eremoea*, Lower.

Geographical distribution of species. — Australian.

1. *L. eremoea* (Lower). Queensland.
   Hypographa eremoea, Lower, Trans. Roy. Soc. S. Austral. Vol. 31, p. 171 (1907).

38. Genus LISSOMMA, Warren

Lissomma. Warren, Novit. Zool. Vol. 12, p. 418 (1905).

Characters. — Face somewhat protuberant, slightly rough-scaled. Palpus moderate, hairy, but less densely so than in *Hypographa,* third joint moderate. Tongue developed. Antenna moderate, strongly unipectinate in ♀ (♂ unknown). Thorax rather stout, hairy beneath. Femora hairy. Foretibia with long apical claw, hindtibia with all spurs. Tarsi spinulose. Abdomen rather stout. Wings rather broad. Wing-expanse 26-35 mm. Forewing with costa nearly straight, apex acute but not produced, distal margin entire, faintly waved, cell about one-half, somewhat produced apically, SC^1 anastomosing with C and afterwards touching SC^{2-3} without anastomosis, SC^{2-3} stalked, SC^3 anastomosing with SC^4; SC^{4-5} stalked from apex of cell, R^1 from apex of cell, R^2 from slightly nearer to R^3 than to R^1, M^1 separate from R^3; hindwing with distal margin entire, rounded, faintly waved, cell about one-half, C anastomosing strongly with SC, SC^2 connate or very short-stalked with R^1; R^2 from somewhat above middle of discocellulars, M^1 approximated to R^3.

Early stages unknown.

Type of the genus : *Lissomma himerata*, Warren (1905).

Geographical distribution of species. — Australian.

1. *L. himerata*, Warren. S. Australia.
   Lissomma himerata, Warren, Novit. Zool. Vol. 12, p. 418 (1905).
2. *L. minuta* (Swinhoe). W. Australia.
   Monoctenia minuta, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 9, p. 167 (1902).
   Hypographa (?) *pallida*, Warren, Novit. Zool. Vol. 9, p. 347 (1902).
   Lissomma minuta, Warren, ibidem, Vol 12, p. 418 (1905).

39. Genus HYPOGRAPHA, Guenée

Hypographa. Guenée, Spec. Gén. Lép. Vol. 9, p. 189 (1858).

Characters. — Face protuberant, usually densely hairy Palpus moderate, second joint densely haired, third joint rather stout, blunt. Tongue developed. Antenna moderate, in ♂ pectinate with long, uniseriate pectinations which do not reach the apex, in ♀ simple, slightly pubescent. Thorax stout,

densely hairy beneath. Femora long-haired. Hindtibia not dilated, with four well-developed spurs. Tarsi strongly spinulose. Abdomen stout, in the type-species and *aristarcha* terminating, particularly in the ♂, in triple tuft. Wing-expanse 33-40 mm. Distal margin crenulate or dentate. Frenulum present. Forewing moderately broad, costa nearly straight, apex acute but not produced, cell moderate, produced apically, SC^1 anastomosing with C, SC^3 out of SC^2, anastomosing speedily with SC^4 (sometimes SC^2 touching SC^4 so that the point of origin of SC^3 is lost), SC^{4-5} from apex of cell, R^1 from apex of cell, R^2 usually somewhat nearer to R^3 than to R^1, M^1 separate from R^3; hindwing with DC^2 vertical or slightly oblique inwards, DC^3 strongly concave, C often anastomosing with SC more or less strongly at middle of cell (1), thence diverging rapidly, SC from a point with R^1, or approximated (stalked in *hiracopis*), R^2 from somewhat above middle of discocellulars, M^1 separate from R^3.

Early stages unknown.

Type of the genus : *Hypographa phlegetonaria*, Guenée (1858).

Geographical distribution of species. — Australian.

1. *H. phlegetonaria*, Guenée. S. E. Australia with Tasmania.
   Hypographa phlegetonaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 190, t. 19, f. 2 (1858).
2. **H. aristarcha, nov. sp.** (2), Prout. Victoria.
3. *H. incongrua* (Walker). Australia (3).
   Agrotis incongrua, Walker, List Lep. Ins. Brit. Mus. Vol. 10, p. 353 (1856).
4. *H. hiracopis*, Meyrick. S. Australia.
   Hypographa hiracopis, Meyrick, Proc. Linn. Soc N. S. Wales (2), Vol. 4, p. 1211 (1890).

40. Genus AMPHICLASTA, Turner

Amphiclasta. Turner, Trans Roy. Soc. S. Austral. Vol. 30, p. 132 (1906).

Characters. — Face with dense protuberant scales. Palpus moderate, porrect, second joint clothed with dense projecting scales, third joint very short, obtuse. Tongue developed. Antenna (?). Thorax stout, densely hairy beneath and with a slight posterior crest above. Hindtibia with all spurs present. Tarsi spinulose. Abdomen stout. Wing-expanse 50 mm. Both wings with distal margin deeply and irregularly dentate. Forewing with costa straight, except near base and apex, apex acute, somewhat produced, C free, SC^{1-2} stalked, SC^2 anastomosing with SC^{3-4} (4), SC^{3-5} stalked from before apex of cell (5); hindwing with C closely approximated to SC to beyond middle of cell, SC^2 separate from R^1 (only known to us from Turner's description).

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(1) In the type-species and *aristarcha*, at least in the five examples we have been able to examine, the anastomosis which characterizes *incongrua* and *hiracopis*, as well as the adjacent genera, gives place to close appression.

(2) **Hypographa aristarcha, nov. sp.** — ♂, 40 mm. Closely allied to *phlegetonaria*, differing as follows : Palpus somewhat shorter. Antenna darker, not yellowish. Palpus, thorax and abdomen less mixed with white beneath, dorsal black belt of abdomen broader, lateral anal tufts apparently shorter. Wings somewhat darker, fringes less strongly white between the teeth ; first line of forewing at one-third (before one-third in *phlegetonaria*), forming two connected blotches in costal half and a spot obliquely inwards therefrom at SM^2, otherwise obsolete ; second line making a curve inwards between M^1 and SM^2, the dark shade which precedes it strong, similarly incurved between R^3 and submedian fold. Underside with second line of forewing and its accompanying dark shade much further apart, and with considerable differences on the hindwing, which has the basal area more strongly darkened with olive, fuscous and red, bounded by thick black shade from one-third of costa nearly to inner margin, somewhat irregularly outcurved to M, thence making a deep sinus inwards, crossed by a large thick blackish wedge-mark before M, the distal part of this wedge filling up the lower arm of cell, postmedial line more distad to the cell, more outbent from above R^3 to below M^1 and again from submedian fold to inner margin ; a strong dark cloud occupies nearly the entire space between R^3 and M^1 from postmedial line to distal margin. Beaconsfield, Victoria, 27 Oct. 1908. Type in coll. W. E. Drake, Beaconsfield.

(3) Walker's specimens (one ♂, one ♀) are without locality, and we are not aware that the form has since been taken.

(4) Or, SC^{2-3} stalked out of SC^4, their stalk anastomosing with SC^4.

(5) Or, SC^{4-5} stalked from before apex of cell.

Early stages unknown.

Type of the genus : *Amphiclasta lygaea,* Turner (1906).

Geographical distribution of species. — S. E. Australia.

1. *A. lygaea,* Turner. Victoria.
Amphiclasta lygaea, Turner, Trans. Roy. Soc. S. Austral. Vol. 30, p. 132 (1906).

41. Genus CERNIA, Walker

Cernia. Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 267 (1860); Warren, Novit. Zool. Vol. 5, p. 10 (1898).

Characters. — Face with appressed scales, not protuberant below. Palpus moderate in ♂, rather long in ♀, second joint with tolerably appressed scales, third joint distinct, short in ♂, rather long and slender in ♀. Tongue developed. Antenna moderate, in ♂ bipectinate with very short clavate pectinations (scarcely longer than width of shaft), in ♀ minutely ciliated, almost simple. Thorax hairy beneath. Femora hairy. Hindtibia stout, in ♂ much dilated, with hair-pencil, in both sexes with four rather strong spurs, the inner median long. Tarsi slightly spinulose; hindtarsus rather short. Wing-expanse 29-33 mm. Wings with distal margins rather irregularly crenulate. Frenulum developed. Forewing not elongate, costa straight, distal margin only oblique from R^3 to tornus, cell one-half, SC^1 anastomosing with or closely approaching C, SC^2 out of stalk of SC^{3-5}, anastomosing briefly with SC^1, R^1 connate or very short-stalked with SC^{2-5}, R^2 from slightly nearer to R^1 than to R^3, M^1 separate from R^3; hindwing with costal area somewhat extended, humeral angle strong; distal margin toothed at SC^2 and at R^3, and slightly at other vein-ends, C approximated to SC to one-half of cell, thence rapidly diverging, SC^2 separate from R^1, R^2 from much nearer to R^1 than to R^3, M^1 separate from R^3.

Early stages undescribed.

The venation of this genus suggests the *Hemitheinae*, but the coloration and *ensemble* of characters leave little doubt that it should be placed here. Warren considers it to be allied to *Arhodia*, but the relationship, if it exists, is not very obvious.

Type of the genus : *Cernia amyclaria*, Walker (1860).

Geographical distribution of species. — Australian.

1, *C. amyclaria*, Walker. Queensland.
Cernia amyclaria, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 267 (1860).
Monoctenia odontias, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 83 (1894).

42. Genus ONYCODES, Guenée

Onycodes. Guenée, Spec. Gén. Lép. Vol. 9, p. 142 (1858).
Chilma. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1692 (1862) (nov. syn.).

Characters. — Face not protuberant, with appressed scales. Palpus short and slender, shortly rough-scaled below, third joint pointed. Tongue developed. Antenna considerably over one-half, in ♂ bipectinate with long pectinations which decrease towards apex. Thorax hairy beneath. Femary slightly hairy. Foretibial inner claw long, terminating in a sickle-shaped process, a minute apical claw. Hindtibia not dilated, all spurs present. Tarsi only moderately spinulose, with fine spinules. Abdomen slender.

Wings ample. Wing-expanse 30-33 mm. Frenulum present. Forewing with costa little arched, apex very slightly produced, distal margin entire, slightly convex from SC^5 to medians, cell about one-half, somewhat produced apically, SC^1 free, approaching C without contact, SC^{2-3} stalked, SC^3 sometimes anastomosing with SC^4, sometimes separate, SC^{4-5} stalked from apex of cell, radials normal, M^1 from close to R^3; hindwing with distal margin somewhat rounded, apex and inner angle well defined, cell about one-half, C approximated to SC to half of cell, thence gradually diverging, SC^2 connate or very short-stalked with R^1, radials normal, M^1 from close to R^3.

Early stages unknown.

Type of the genus : *Onycodes traumataria,* Guenée (1858).

Geographical distribution of species. — Australian.

1. *O. traumataria*, Guenée. S. E. Australia with Tasmania.
   Onycodes traumataria, Guenée, Spec. Gén. Lép. Vol. 9, p. 143, t. 9, f. 8 (1858).
   Chilma flagrantaria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1692 (1862) (nov. syn.) (1).

Note. — « *Onychodes* » *heliochrysa*, Lower, *Trans. Roy. Soc. S. Austral.* Vol. 17, p. 288 (1902) belongs to the *Geometrinae*, probably to the genus *Mnesampela*, Meyrick. Other species which have been referred to under this generic name will be found under *Onychopsis*, *Gerusia* and *Homospora*, and two which are at present unknown to us are given at the end of this fascicle among the « Species incertæ sedis ».

43. Genus ONYCHOPSIS, nov. nom., Prout

Onychopsis, nov. nom. Prout.
Onychodes. Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1199 (1890) (nec *Onycodes*, Guenée).

Characters. — Face with appressed scales above, slightly tufted below. Palpus moderate, rather stout, rough-scaled, third joint moderate. Tongue developed. Antenna moderate, in ♂ bipectinate to apex, in ♀ very shortly unipectinate, each pectination terminating in a pair of bristles, and with a strong bristle at its base. Thorax densely hairy beneath. Femora slightly hairy. Foretibial claw terminating in a sickle-shaped process. Hindtibia not dilated, all spurs present. Tarsi spinulose. Wings ample. Wing-expanse 55-60 mm. Forewing with costa slightly arched, apex acutely produced, distal margin somewhat excised below apex, thence strongly convex, oblique below, cell nearly three-fifths, SC^1 anastomosing at a point or more strongly with C, SC^{2-3} stalked (2), SC^3 anastomosing with SC^4, SC^{4-5} stalked from before apex of cell, radials normal, M^1 well separated from R^3; hindwing with cell about one-half, C appressed to SC from near base to middle of cell, thence rather rapidly diverging, SC^2 somewhat approximated at its base to R^1, radials normal, M^1 well separated from R^3.

Early stages unknown.

This genus is no doubt related to *Onycodes*, from which it differs in somewhat robuster build, much stronger palpus, in the anastomosis of SC^1 with C in forewing, the separation of SC^2 from R^1 in

(1) Walker gives « S. Africa » as the locality or his type, but this is manifestly erroneous; the collection from which it came (Becker's) was from « S. Africa *and Australia* »; and evidently the locality of this particular specimen got mixed. A second specimen in coll. Br. Mus., collected by G. F. Mathew, is labelled « New Zealand », probably also in error. It may be the same specimen to which Meyrick alludes as from Hobart (Tasmania).

(2) Presumably the base of SC^3 is sometimes obselete, as in *Arhodia*, *Œnochroma subustaria*, etc., for Meyrick in his Revision (p. 1139) distinguishes the genus as having « Forewings with vein 10 (SC^2) free ». It is possible, however, that he merely means « free from 11 » (SC^4), as he is differentiating it from *Antasia*, which has « 10 anastomosing with 11 ». See footnote (1) to p. 6.

hindwing, the different position of M^1 in both wings, and in other details of structure. Meyrick, unable to examine *traumataria*, Guenée, the type of *Onycodes*, drew up the diagnosis of *his Onychodes* (a mere emendation of Guenée's name, and of no independent validity) from *lutosaria;* as the two species are generically differentiable, we propose the new name of *Onychopsis* for this latter.

Type of the genus : *Onychopsis lutosaria* (Felder) = *Arhodia (?) lutosaria*, Felder.

Geographical distribution of species. — Australian.

1. *O. lutosaria* (Felder). S. E. Australia, ? N. Australia.
   Arhodia (?) *lutosaria*, Felder, Reise Novara, Lep. Het. t. 124, f. 15, 16 (1875).
   Arhodia (?) *lutosaria*, var. *punicea*, Felder, ibidem, f. 17, 17*a* (1875) (ab. vel var.).
   Onychodes lutosaria, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1200 (1890).

44. Genus CIRCOPETES, nov. gen., Prout

Circopetes (Meyrick, MS.), **nov. gen.** Prout.

Characters. — Face not protuberant, with moderately appressed scales. Palpus moderate, or rather short, second joint with long projecting scales, third joint small. Tongue developed. Antenna moderate, in ♂ bipectinate almost to apex, in ♀ strongly dentate, the teeth minutely ciliated and each surmounted with a short bristle. Thorax rather stout, hairy beneath. Femora hairy. Foretibia rather short, with inner claw normal and a rather strong apical claw. Hindtibia not dilated, all spurs present, somewhat approximated. Tarsi strongly spinulose. Abdomen rather robust, especially in ♀, in ♂ with strong lateral tufts. Wings rather robust. Wing-expanse 36-60 mm. Frenulum present. Forewing with costa nearly straight, slightly concave before apex, apex acute and more or less produced, distal margin concave below apex, thence somewhat strongly gibbous, oblique, often faintly crenulate, cell somewhat over one-half, SC^1 free, closely appressed successively to C and to SC^{2-3}, SC^{2-3} stalked, SC^3 anastomosing, almost immediately after leaving SC^2, with the stalk of SC^{4-5}, SC^{4-5} from before apex of cell, radials normal, M^1 separate from R^3; hindwing with distal margin waved, often weakly crenulate, C approximated to SC to one-half of cell, SC^2 approximated to R^1, R^2 from slightly nearer to R^1 than to R^3, M^1 separate from R^3 (**Pl. 2, Fig. 4**).

Early stages unknown.

May be regarded as a connecting link between *Monoctenia* or *Œnochroma* — to which it was formely referred — and *Onychopsis* or *Gerusia;* from the former and its allies (*Phallaria*, etc.) it differs in the form of wings, particularly the distal margin of forewing, in the smoother frons, etc.; from the latter in the somewhat stronger build, and in the freedom of C of the forewing, and from *Gerusia* (except Section III) further in the non-anastomosis of C with SC in hindwing.

Type of the genus : *Circopetes obtusata* (Walker) = *Monoctenia obtusata*, Walker.

Geographical distribution of species. — Australian.

1. *C. obtusata* (Walker). W. to S. E. Australia with Tasmania.
   Monoctenia obtusata, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 279 (1860).
   Monoctenia himeroides, Walker, ibidem, p. 279 (1860).
   Arhodia obtusata, Warren, Novit. Zool. Vol. 5, p. 9 (1898).
   Arhodia modesta, Warren, ibidem, Vol. 11, p. 485 (1904).
2. *C. orthotoma* (Lower) (huj. gen. ?). Queensland.
   Arrhodia orthotoma, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 83 (1895).

45. Genus GERUSIA, Warren

Gerusia. Warren, Novit. Zool. Vol. 14, p. 118 (1907).

Characters. — Face not protuberant, with appressed scales. Palpus moderate, stout, rather rough-scaled, third joint small, blunt. Tongue present. Antenna just over one-half, in ♂ stoutly bipectinate, the pectinations decreasing in length towards apex. Thorax hairy beneath. Femora with short soft hair. Hindtibia with all spurs, the inner of each pair longer than the outer. Tarsi spinulose. Wing-expanse 40-44 mm. Wings ample, apices obtuse, distal margins usually denticulate. Frenulum present. Forewing of ♂ often with a patch of black scales beneath, covered by a long pencil of hairs from base, SC^1 anastomosing at a point with C, SC^{2-3} stalked from just before apex of cell, anastomosing with SC^1, SC^3 usually further anastomosing with SC^4 (in *excusata* sometimes separate therefrom), radials normal, M^1 separate from R^3; hindwing with C appressed to, or generally anastomosing with SC in basal half of cell, SC^2 separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Related to *Onycodes*, but differing in the anastomosis of SC^{2-3} of forewing with SC^1 and the better-developed palpus; also — except in the aberrant species *rasimargo* — in the anastomosis of C of hindwing with SC and in the irregular wing-margins. Whetter it would be better to transfer *rasimargo* to *Onycodes* or *Onychopsis* must be left for future study; we have assumed Warren to be correct in making it agree with *virescens* in forewing venation.

Type of the genus : *Gerusia virescens*, Warren (1907).

Geographical distribution of species. — New Guinea to S. E. Australia.

Section I. — Distal margins not entire; C of hindwing anastomosing with SC; forewing of ♂ with hair-pencil from base beneath.

1. *G. virescens*, Warren. — British New Guinea.
   Gerusia virescens, Warren, Novit. Zool. Vol. 14, p. 120 (1907).
   Gerusia virescens, ab. *viridimacula*, Warren, ibidem, p. 120 (1907) (ab.).
2. *G. olivescens*, Warren. — British New Guinea.
   Gerusia olivescens, Warren, Novit. Zool. Vol. 14, p. 119 (1907).

Section II. — Distal margins not entire; C of hindwing anastomosing with SC; forewing of ♂ without hair-pencil from base beneath.

3. *G. excusata* (Walker). — E. Australia.
   Monectenia excusata, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 280 (1860).
4. *G. multicolora* (Lucas). — E. to S. E. Australia.
   Onychodes multicolora, Lucas, Proc. Roy. Soc. Queensl. Vol. 8, p. 81 (1892).
   Onycodes rubra, Warren, Novit Zool. Vol. 4, p. 27 (1897) (nov. syn.).

Section III. — Distal margins entire; C of hindwing appressed to SC; forewing of ♂ without hair-pencil from base beneath (an huj. gen. ?).

5. *G. rasimargo*, Warren. — British New Guinea.
   Gerusia rasimargo, Warren, Novit. Zool. Vol. 14, p. 119 (1907).

46. Genus PALÆODOXA, Warren

Palæodoxa. Warren, Novit. Zool. Vol. 14, p. 121 (1907).

Characters. — Face smooth-scaled, very slightly protuberant below. Palpus moderate, upturned, second joint stout, rough-scaled, terminal joint small. Tongue present. Antenna in ♂ strongly bipectinate almost to apex, the anterior row of pectinations shorter than the posterior. Hindtibia with all spurs. Wing-expanse 44-48 mm. Forewing with the apex blunt, a very small incision below it, distal margin elbowed at vein R^1, tornus not strongly angled, hindwing strongly excised between R^1 and R^3. Frenulum present. Forwing with SC^1 anastomosing at a point with C, SC^2 free, SC^{3-5} stalked from near and of cell, R^2 from a little nearer to R^1 than to R^3, M^1 from near R^3; hindwing with C approximated to SC for a short distance to middle of cell, thence divergent, SC^2 separate from R^1, M^1 separate from R^3.

Early stages unknown.

This genus is apparently related to the preceding, but differs in the shape of the wings, the venation, etc.

Type of the genus : *Palaeodoxa subignea*, Warren (1907)

Geographical distribution of species. — Papuan.

1. *P. subignea*, Warren. British New Guinea.
   Palaedoxa subignea, Warren, Novit. Zool. Vol. 14, p. 121 (1907).
   Palaedoxa subignea, ab. *suffusa*, Warren, ibidem, p. 121 (1907) (ab.).

47. Genus DICYCLODES, Warren

Dicyclodes. Warren, Novit Zool. Vol. 13, p. 75 (1906).

Characters. — Face protuberant, with moderately appressed scales. Palpus moderate, rather thick, clothed with long erect scaling. Tongue present. Antenna rather long, in ♂ with uniseriate pectinations to two-thirds, in ♀ laminate, nearly simple, slightly pubescent. Thorax densely hairy beneath. Femora clothed with rather long, fine silky hairs. Hintibia with all spurs. Tarsi spinulose. Wings robust. Wing-expanse 38-50 mm. Frenulum present. Forewing elongate, with costa nearly straight, apex minutely produced, distal margin strongly gibbous above, oblique below, cell more than one-half, produced apically, discocellulars inangled, SC^1 free, though close to C and to SC^2, $SC^{2\,3}$ stalked, SC^3 anastomosing with SC^4, SC^{4-5} stalked from apex of cell, radials normal, M^1 approximated at its origin to R^3; hindwing with distal margin moderately convex, angles well pronounced, discocellulars forming a deep sinus, the wing here hyaline, C closely approximated to SC^1 from one-fourth to-half of cell, SC^2 separate from R^1, radials normal, M^1 connaie with R^3.

Early stages unknown.

This genus appears to have some relationship with the Indo-Malayan *Sarcinodes*, and may be regarded as a link between it and the typical *Œnochroma*-group of Australia, with which it has still more in common.

Type of the genus : *Dicyclodes hieroglyphica*, Warren (1906).

Geographical distribution of species. — Papuan.

1. *D. hieroglyphica*, Warren. British New Guinea.
   Dicyclodes hieroglyphica, Warren, Novit. Zool. Vol. 13, p. 76 (1906).

48. Genus SARCINODES, Guenée

Sarcinodes. Guenée, Spec. Gén. Lép. Vol. 9, p. 188 (1858) ; Hampson, Fauna Ind. Moths, Vol. 3, p. 315 (1895).
Mergana. Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 292 (1860).
Auxima. Walker, ibidem, Vol. 26, p. 1526 (1862).

Characters. — Face with conical projection. Palpus moderate, second joint subascending, densely clothed with long hair-scales, third joint obtusely pointed. Tongue present. Antenna rather long, in ♂ unipectinate to two-thirds, in ♀ nearly simple, laminate, slightly pubescent (in *restitutaria* and *perakaria* shortly unipectinate). Thorax densely hairy beneath. Femora hairy. Hindtibia not dilated, all spurs present. Tarsi spinulose. Wings ample. Wing-expanse 45-67 mm. Frenulum present. Forewing with costa straight, or very slightly curved, apex acute and produced, distal margin sinuate below apex, thence slightly gibbous, cell less than one-half, but produced apically, discocellulars weak, occasionally obsolescent, at least in part, somewhat incurved in middle, SC^1 free, appressed to SC^2, SC^2 free, appressed to SC^{3-4}, SC^{3-5} stalked from apex of cell, R^1 generally short-stalked with them, R^2 from much above middle of discocellulars, M^1 approximated at its origin to R^3 ; hindwing with distal margin convex, angles distinct, cell considerably less than one-half, C approximated or appressed to SC for some distance to middle of cell, thence rapidly diverging, SC^2 separate from R^1, R^{1-2} closely approximated at their origin, or from a point at apex of cell (or even very short-stalked). M^1 closely approximated at its origin to R^3 (**Pl. 2, Fig. 5**). ♂ genitalia (*carnearia*) with uncus obtuse, articulated to tegumen and to « subscaphium » ; harpe short, broad, rounded towards apex, costal ridge bearing a strong, slightly toothed, leaf-like flap of hard chitin, on the margin below the apex a long, thin, tongue-like flap ; « sacculus » aysmmetrical, left-hand upper edge produced into long, hard tongue ; « vinculum » bilobed ; penis long, with apex spoon-shaped, toothed on back, mouth very oblique, vesica spined and scobinated.

Early stages apparently unknown.

This genus, so typical of the *Œnochromicae* in its general build and its unipectinate antennæ, is remarkable in its venation in respect of the position of R^2 of both wings, particularly the hindwing ; we have noticed other instances in this tribe (*Petovia*, *Marcodava*, etc.) of the rise of R^2 of hindwing nearer to R^1 than to R^3, much as in the *Hemitheinae*, but in the present and in the next following genus (and in the ♂ *only* of *Alex* among our Group II) it is actually connate or stalked with R^1 ; while even in the forewing R^2 arises from quite near R^1, and the absence of anastomosis of the subcostals though not altogether rare in the *Œnochrominae*, is a characteristic Hemitheine feature ; there, however, SC^2 is normally stalked with SC^{3-5}.

Type of the genus : *Sarcinodes carnearia*, Guenée (1895).

Geographical distribution of species. — India to Malaysia.

1. *S. carnearia*, Guenée — Bengal to Upper Burma.
   Sarcinodes carnearia, Guenée, Spec. Gén. Lép. Vol. 9, p. 188 (1858).
   Mergana bilineata, Moore, Proc. Zool. Soc. London, p. 624 (1867).
2. *S. vultuaria*, Guenée — Borneo.
   Sarcinodes vultuaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 189 (1858).
3. *S. aequilinearia* (Walker). — Bengal, Assam.
   Mergana aequilinearia, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 292 (1860).
   Auxima trilineata, Walker, ibidem, Vol. 35, p. 1576 (1862).

Sarcinodes equilinearia, Butler, Ill. Het. Coll. Brit. Mus. Vol. 6, p. 60 (1886).
Sarcinodes aequilinearia, Butler, ibidem, t. 115, f. 5, 6 (1886).

4. *S. debitaria* (Walker). — Bengal, Assam, ? Sumatra.
Auxima debitaria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1527 (1862).
Mergana debitaria, Moore. Proc. Zool. Soc. Lond. p. 624 (1867).
Sarcinodes debitaria, Butler, Ill. Het. Coll. Brit. Mus. Vol. 6, p. 59, t. 114, f. 12 (1886).

5. *S. restitutaria* (Walker). — India and W. China to Borneo.
Auxima restitutaria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1527 (1862).
Auxima sumatraria, Walker, ibidem, Vol. 35, p. 1577 (1866).
Sarcinodes restitutaria, Butler, Ill. Het. Coll. Brit. Mus. Vol. 6, p. 59, t. 115, f. 1, 2 (1886).
Sarcinodes restitutaria, var. *aegrota*, Butler, ibidem, p. 60, t. 115, f. 3, 4 (1886) (ab.).

6. *S. perakaria*, Swinhoe. — Perak.
Sarcinodes perakaria, Swinhoe, Ann. Mag. Nat. Hist. (7), Vol. 3, p. 110 (1899) (præc. subsp.?).

7. *S. lilacina*, Moore. — Assam.
Sarcinodes lilacina, Moore, Lep. Coll. Atkinson, p. 234 (1888).

8. *S. susana*, Swinhoe. — **Pl. I, Fig. 16.** — Khásis.
Sarcinodes susana, Swinhoe, Trans. Ent Soc. Lond. p. 488 (1891).
Sarcinodes lilacina, form. *susana*. Hampson, Fauna Ind. Moths, Vol. 3, p. 316 (1895).

9. *S. punctata*, Warren. — Borneo.
Sarcinodes punctata, Warren, Novit. Zool. Vol. 1, p. 357 (1894).

10. *S. subfulvida*, Warren.
a. *Sarcinodes subfulvida subfulvida*. — New Guinea, Trobriand Islands
Sarcinodes subfulvida, Warren, Novit. Zool. Vol. 3, p. 280 (1896).
Sarcinodes subfulvida, ab. *derufata*, Warren, ibidem, Vol. 10, p. 121 (1903) (ab.).
Sarcinodes subfulvida, ab. *olivata*, Warren, ibidem, Vol. 12, p. 9 (1905) (ab.).
b. *Sarcinodes subfulvida compacta*. — Amboina.
Sarcinodes compacta, Warren, Novit. Zool. Vol. 3, p. 355 (1896).
Sarcinodes subfulvida, form. *compacta*, Swinhoe, Trans. Ent. Soc. Lond. p. 640 (1902).

NOTE. — « *Sarcinodes* (?) » *holzi*, Pagenstecher, *Lepid. v. Amboina.* (1884) p. 83, is unknown to us, but evidently does not belong to this genus, nor even to the subfamily. Possibly a Drepanid?

49. GENUS THAUMATOGRAPHE, WARREN

Thaumatographe(1). Warren, Novit. Zool. Vol. 14, p. 122 (1907).

Characters. — Face slightly protuberant, rough-scaled. Palpus rather short, thick, rough-scaled, third joint short. Tongue absent. Antenna bipectinate to two-thirds in both sexes. Thorax densely hairy beneath. Legs short. Femora hairy. Hindtibia with four rather short stout spurs. Wing-expanse 48-58 mm. Wings with margins entire. Frenulum absent. Forewing elongate, distal margin almost as long as inner, SC^1 free, $SC^{2\text{-}5}$ stalked from just before R^1, SC^2 first leaving the stalk, R^2 from nearer to R^1 than to R^3, M^1 long-stalked with R^3; hindwing not large, rounded, C rather shortly approximated to SC before middle of cell, SC^2 and R^1 separate, R^2 connate with R^1, M^1 stalked with R^3.

Early stages unknown.

This genus and the following, though doubtless along independent paths, have made an approach to the Geometrine tribe *Amphidasiicae*. In the present genus not only the atrophy of the tongue, and the

(1) This name is not to be considered as preoccupied by *Thaumatographa*, Walsingham, 1897, though rather unfortunately close thereto.

shaggy clothing of the thorax recall the last-named tribe, but even the shape of the wings and their general facies; yet the full development of vein R^2 of the hindwing necessitates its retention in the *Œnochrominae* as at present constituted, while its peculiar position shows at least analogy, if not homology with *Sarcinodes*.

Type of the genus : *Thaumatographe singularis*, Warren (1907).

Geographical distribution of species. — Papuan.

1. *T. singularis*, Warren. British New Guinea.
Thaumatographe singularis, Warren, Novit. Zool. Vol. 14, p. 122 (1907).

50. Genus ULIOLEPIS, Warren

Uliolepis. Warren, Novit. Zool. Vol. 4, p. 385 (1897).

Characters. — Face clothed with hair. Palpus weak, cloted with long hair. Tongue absent. Antenna in ♀ bipectinate (♂ unknown). Thorax densely hairy beneath. Legs (?, broken in the unique type-specimen). Abdomen stout. Wing-expanse 34 mm. Wings thinly scaled, forewing with apex obtuse, hindwing rounded. Frenulum well developed. Forewing with cell elongate, discocellulars biangulate, SC^1 free, SC^{2-5} stalked, R^1 from apex of cell, R^2 from lower angle of discocellulars, M^1 approximated to R^3; hindwing with discocellulars biangulate, C approximated to SC to beyond one-half, SC^2 connate with R^1, R^2 from lower angle of discocellulars, thus nearer to R^3 than to R^1, M^1 approximated to R^3.

Early stages unknown.

Type of the genus : *Uliolepis pilosa*, Warren (1897).

Geographical distribution of species. — Afghanistan.

1. *U. pilosa*, Warren. Afghanistan.
Uliolepis pilosa, Warren, Novit. Zool. Vol. 4, p. 386 (1897).

51. Genus ABRAXAPHANTES, Warren

Abraxaphantes. Warren, Novit. Zool. Vol. 1, p. 374 (1894).

Characters. — Face slightly protuberant below, with appressed scales. Palpus long, fringed with hair on both sides. Tongue developed. Antenna scarcely one-half length of forewing, unipectinate in both sexes. Thorax hairy beneath. Femora glabrous. Hindtibia with all spurs. Abdomen in ♂ long and slender. Wings ample. Wing-expanse 63-78 mm. Frenulum rudimentary, retinaculum wanting. Forewing with cell more than one-half, discocellulars rather short, SC^{1-2} stalked, SC^2 closely approaching SC^{3-4}, but without contact, SC^{3-5} stalked from before end of cell, radials normal, M^1 separate from R^3; hindwing somewhat produced at extremity of SC^2, C approximated to SC to about one-half of cell, thence diverging, SC^2 separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Type of the genus : *Abraxaphantes perampla* (Swinhoe) = *Abraxas perampla*, Swinhoe (1894).

Geographical distribution of species. — Indian.

1. *A. perampla* (Swinhoe). Burma.
Abraxas perampla, Swinhoe, Trans. Ent. Soc. Lond. p. 211 (1890).
Abraxaphantes perampla, Warren, Novit. Zool. Vol. 1, p. 374 (1894).

52. Genus PALÆOMYSTIS, Warren

Palæomystis. Warren, Novit. Zool. Vol. 1, p. 379 (1894).

Characters. — Face with appressed scales. Palpus short. Tongue developed. Antenna rather short in both sexes, nearly simple, subserrate. Thorax slightly hairy beneath. Legs rather short. Femora glabrous. Hindtibia not dilated, with all spurs. Tarsi not spinulose. Wings ample. Wing-expanse 26-46 mm. Frenulum present. Forewing slightly produced at apex, SC^{1-2} stalked, SC^2 anastomosing with SC^{3-4} just beyond SC^5, SC^{3-5} stalked from a point with R^1, radials normal, M^1 separate from R^3; hindwing sharply produced at extremity of SC^2, cell rather short, in the ♂ with lower arm much produced, C approximated to SC to middle of cell, SC^2 separate from R^1, radials normal in the ♀, R^2 in the ♂ from the lower arm of the cell, thus much nearer to R^3 than to R^1, M^1 well removed from R^3, SM^2 in ♂ running into inner margin, which is here cut away.

Early stages unknown.

This genus and *Uliolepis*, alike in nothing else, are alike peculiar among the *Œnochrominae* in exhibiting hindwing venation which is otherwise characteristic only of a portion of the *Larentiinae*, namely the elongation of the cell below, with R^2 arising near its lower angle. But in the present genus, it is only the male which shows this peculiarity, and the modifications of the hindwing in this sex here suggest some possible affinity with certain Larentiine groups (e. g., the *Lobophora* section).

Type of the genus : *Palaeomystis falcataria* (Moore) = *Urapteryx* (?) *falcataria*, Moore (1894).

Geographical distribution of species. — India to China.

1. *P. falcataria* (Moore). Bengal, Tibet.
   Urapteryx (?) *falcataria*, Moore, Proc. Zool. Soc. Lond. p. 613 (1867).
   Metrocampa unio, Oberthür, Etud. Ent. Fasc. 11, p. 32, t. 6, f. 43 (1886).
   Palaeomystis falcataria, Warren, Novit. Zool. Vol. 1, p. 380 (1894).
2. *P. mabillaria* (Poujade). W. China.
   Erosia (?) *mabillaria*, Poujade, Bull. Mus. Hist. Nat. Paris, nº 2, p. 57 (1895); Ann. Soc. Ent. Fr. p. 311, t. 6, f. 12 (1895).
   Palaeomystis mabillaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 19, p. 544 (1897).

53. Genus DORATOPTERA, Hampson

Doratoptera. Hampson, Fauna Ind. Moths, Vol. 3, p. 318 (1895).

Characters. — Face protuberant, rounded. Vertex with a large conical tuft. Palpus rather short, hairy. Tongue strong. Antenna in ♀ almost simple, finely pubescent (♂ unknown). Thorax hairy beneath. Legs rather stout (broken). Femora hairy. Wing-expanse 58 mm. Frenulum present. Forewing with apex extremely produced and acute, tornus entirely rounded off, SC^1 anastomosing with C, SC^2 free, SC^{3-5} long-stalked from before apex of cell, radials normal, medians curved, M^1 separate from R^3; hindwing with costa arched distally, apex strongly produced at extremity of SC^2, discocellulars inangled, C closely approximated to SC to one-half, thence gradually diverging, SC^2 connate with R^1, R^2 very slender, M^1 separate from R^3.

Early stages unknown.

Of this very singular genus, the original type-specimen still remains unique, and it is hard to stifle a suspicion that it might be a malformation or « freak » of some other species; yet of what?

Type of the genus : *Doratoptera nicevillei*, Hampson (1895).

Geographical distribution of species. — Indian.

1, *D. nicevillei*, Hampson. Darjiling.
Doratoptera nicevillei, Hampson, Fauna Ind. Moths, Vol. 3, p. 318 (1895).

54. Genus LOXORHOMBIA, Warren

Loxorhombia. Warren, Novit. Zool. Vol. 1, p. 369 (1894).

Characters. — Face somewhat protuberant below. Palpus rather long, slender, second joint rough-scaled, third joint rather long, pointed. Tongue present. Antenna moderate, in ♂ bipectinate nearly to apex, the pectinations long, decreasing in length distad. Thorax somewhat hairy beneath. Legs rather long and slender. Femora nearly glabrous. Hindtibia with hair-pencil, all spurs present, rather unequal. Wings ample. Wing-expanse 35-38 mm. Frenulum present. Forewing with apex acute, distal margin vertical above, then somewhat ventricose, cell about one-half, SC^{1-2} stalked, their stalk anastomosing with C, SC^2 further anastomosing with SC^{3-4}, SC^{3-5} stalked from before apex of cell, radials normal, M^1 separate from R^3; hindwing produced to a sharp tooth at extremity of SC^2, C approximated to SC to at least one-half of cell, SC^2 approximated to R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Type of the genus : *Loxorhombia idea* (Swinhoe) = *Panagra idea*, Swinhoe (1894).

Geographical distribution of species. — Indian.

1. *L. idea* (Swinhoe). Burma.
Panagra idea, Swinhoe, Trans. Ent. Soc. Lond. p. 211, t. 7, f. 2 (1890).
Loxorhombia idea, Warren, Novit. Zool. Vol. 1, p. 369 (1894).

55. Genus HETERALEX, Warren

Heteralex. Warren, Novit. Zool. Vol. 1, p. 369 (1894).
Monotaxia. Warren, ibidem, p. 370 (1894) (nov. syn.).
Canonistis. Meyrick, Trans. Ent. Soc. Lond. p. 74 (1897) (nov. syn.).

Characters. — Face with appressed scales. Palpus moderate, second joint rough-scaled, third joint rather strong, in ♀ rather long. Tongue developed. Antenna in ♂ with long uniseriate pectinations, apex simple, in ♀ sparsely ciliated. Thorax hairy beneath. Legs rather slender. Femora nearly glabrous. Hindtibia with all spurs present. Wings ample, rather delicate. Wing-expanse 34-40 mm. Frenulum present. Forewing with costa nearly straight, apex acute, distal margin entire, faintly waved, cell about one-half, SC^{1-2} stalked, anastomosing with C, SC^2 afterwards appressed to SC^{3-4} or anastomosing at a point, SC^{3-5} stalked from just before apex of cell, radials normal, M^1 separate from R^3; hindwing with distal margin and apex rounded, C approximated to SC to one-half of cell, SC^2 approximated at base to R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Type of the genus : *Heteralex aspersa*, Warren (1894).

Geographical distribution of species. – Malaysia to Hong Kong.

1. *H. aspersa*, Warren. Sumatra to Hong Kong.
   Heteralex aspersa, Warren, Novit. Zool. Vol. 1, p. 369 (1894).
   Epidesma unilinea, Swinhoe, Trans. Ent. Soc. Lond. p. 640 (1902) (nov. syn.).
2. *H. rectilineata* (Guenée). Malay Peninsula, Borneo.
   Cassyma rectilineata, Guenée, Spec. Gén. Lép. Vol. 10, p. 18 (1858).
   Nadagara (?) *microneata*, Walker, List Lep. Ins. Brit. Mus. Vol. 24, p. 1096 (1862).
   Panagra rarata, Walker, ibidem, Vol. 26, p. 1662 (1862).
   Monotaxia rectilineata, Warren, Novit. Zool. Vol. 1, p. 370 (1894).
   Canonistis rectilineata, Meyrick, Trans. Ent. Soc. Lond. p. 74 (1897).

56. Genus EUMELEA, Duncan

Eumelea. Duncan, Nat. Hist. Exot. Moths, p. 215 (1841).
Palibothra. Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, p. 26 (1856).

Characters. — Face with a slight projection of scales. Palpus moderately long, second joint upcurved, strongly rough-scaled, third joint rather slender, cylindrical, smooth. Tongue developed. Antenna nearly as long as forewing, slender, almost simple in both sexes, slightly pubescent, a minute spine-like process at distal extremity of each segment. Thorax hairy beneath, a strong tuft posteriorly in ♂. Legs very long, slender. Femora hairy. Hindtibia in ♂ comparatively short, somewhat hairy, and with strong fringe of hairs on under side, four spurs rather approximated, median pair the longer; hindtibia in ♀ very long, without hair, the spurs more equal. Tarsi spinulose. Abdomen long and slender. Wings ample. Wing-expanse 38-61 mm. Frenulum developed. Forewing with costa slightly arched, apex rather acute, distal margin oblique, discocellulars generally weak, especially DC^2, SC^1 anastomosing shortly with C, then for a longer distance with SC^2, SC^{3-5} stalked from apex of cell, radials normal, M^1 from near R^3; hindwing with distal margin generally slightly flexuous, little oblique, apex roundly produced, anal angle pronounced, C rather shortly appressed to SC near base, thence gradually diverging, SC^2 short-stalked with R^1, radials normal, M^1 from close to R^3. ♂ genitalia (*florinata*) with many elaborate developments which are not at present clearly explicable; uncus complicated, compressed laterally, narrow, with swollen head, hairy, at the foot a small, bulbed hardened organ, below are two lateral arms constituting a trifid uncus, articulated to the tegumen; beneath this, and articulated to the joint ot the uncus and tegumen are two more lateral arms; harpe with costa straight, narrowly margined with hard chitin; penis long, mouth deeply cut, toothed, vesica projecting as a point, ædœagus rapidly narrowing to base, where there in a small bulb; large, bilobed, hairy « osmatoria » laterally from junction of genitalia with eighth abdominal.

Early stages apparently unknown.

A large and very natural genus, many of the species, or subspecies, so closely allied that it is impossible at present to say where a local race ends and a species begins. Our rough catalogue of the forms therefore lays no claim to finality.

Type of the genus : *Eumelea sanguinata*, Warren = *Eumelea rosalia*, Duncan (nec Stoll) (1841).

Geographical distribution of species. — Indo-Australian.

1. *E. sanguinata*, Warren.

a. *Eumelea sanguinata sanguinata*. — Malayasia.

Eumelea rosalia, Duncan, Nat. Hist. Exot. Moths, p. 215 (1841) (nec Stoll).
Eumelea sanguinata, Warren, Novit. Zool. Vol. 2, p. 84 (1895).

b. *Eumelea sanguinata australiensis*. — N. Australia.

Eumelea sanguinata australiensis, Warren, Novit. Zool. Vol. 4, p. 29 (1897).

2. *E. rosalia* (Stoll). — Amboina, Celebes, ? Moluccas.

Phalaena Geometra rosalia, Stoll, in Cramer, Pap. Exot. Vol. 4, p. 152, t. 368, f. F (1781).
Ametris punicearia, Hübner, Verz. bek. Schmett. p. 303 (1826 ?).
Botys rosalia, Verloren, Cat. Ins. Lep. Crameri, p. 136 (1837).
? *Palibothra rosalia*, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, p. 26 (1856).
Eumelea rosaliata, Guenée, Spec. Gén. Lép. Vol. 9, p. 392 (1858).
Eumelea rosalia, Warren, Novit. Zool. Vol. 6, p. 15 (1899).

3. *E. vulpenaria* (Stoll). — India with Ceylon.

Phalaena Geometra vulpenaria (1), Stoll, in Cramer, Pap. Exot. Vol. 6, p. 245, 252, t. 400, f. O, P (1782).
Ametris vulpenaria, Hübner, Verz. bek. Schmett. p. 303 (1826 ?).
Phalaena vulpenaria, Verloren, Cat. Ins. Lep. Crameri, p. 150 (1837).
Palibothra vulpenaria, Herrich-Schäffer, Samml. Aussereur Schmett. Vol. 1, p. 26 (1856).
Eumelea vulpenaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 393 (1858).
Eumelea rosalia, var. (?) *vulpenaria*, Snellen, in Veth, Midden-Sumatra, Vol. 4 (8), p. 54 (1881); Hampson, Fauna Ind. Moths, Vol. 3, p. 320 (1895).
Eumelia olivacea, Hampson, Ill Het. Coll. Brit. Mus. Vol. 8, p. 3, t. 151, f. 17 (1891) (ab.) (nov. syn.)

4. *E. gravidata* (Fabricius) (præc. form.?). — India.

Phalaena gravidata, Fabricius, Ent. Syst. Vol. 3 (2), p. 175 (1794).
Eumelea flavata, Moore, Lep. Ceyl. Vol. 3, p. 440, t. 198, f. 3 (1887) (nov. syn.).
Eumelea vulperaria, [ab.] *gravidata*, Aurivillius, Ent. Tidskr. Vol. 18, p. 166 (1897).

5. *E. feliciata*, Guenée.

a. *Eumelea feliciata feliciata*. — India to Malaysia.

Eumelea feliciata, Guenée, Spec. Gén. Lép. Vol. 9, p 393 (1858).
Eumelea rosalia, var. (?) *feliciata*, Snellen, in Veth, Midden-Sumatra, Vol. 4 (8), p. 54 (1881).

b. *Eumelea feliciata sangirensis*. — Sangir, Celebes, Lombok.

Eumelea feliciata sangirensis, Warren, Novit. Zool. Vol. 3, p. 357 (1896).

6. *E. florinata*, Guenée. — Malaysia.

Eumelea florinata, Guenée, Spec. Gén Lép. Vol. 4, p. 392 (1858).
Eumelea rosalia, var. (?) *florinata*, Snellen, in Veth, Midden-Sumatra. Vol. 4 (8), p. 54 (1881).

7. *E. ludovicata*, Guenée.

a. *Eumelea ludovicata ludovicata*. — India to Malaysia.

Phalaena rosata, Fabricius, Ent. Syst. Vol. 3 (2), p. 175 (1794) (fide Aurivillius, Ent. Tidskr. Vol. 18, p. 166) (nec *rosalia*, Stoll).
Eumelea ludovicata, Guenée, Spec. Gén. des Lép. Vol. 9, p. 393 (1858).
Eumelea rosalia, var. (?) *ludovicata*, Snellen, in Veth, Midden-Sumatra, Vol. 4 (8), p. 54 (1881); Hampson, Fauna Ind. Moths, Vol. 3, p. 321 (1895).

b. *Eumelea ludovicata atomata*. — S. Java, Formosa.

Eumelea ludovicata atomata, Warren, Novit. Zool. Vol. 3, p. 357 (1896).

c. *Eumelea ludovicata biflavata*. — Penang, Pulo Laut, Nias.

Eumelea ludovicata biflavata, Warren, Novit. Zool. Vol. 3, p. 357 (1896).

d. *Eumelea ludovicata insulata*. — Liu-Kiu Islands.

Eumelea ludovicata insulata, Warren, Novit. Zool. Vol. 3, p. 357 (1896).

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(1) The name is so spelled in the French text and in the index; but in the Dutch text it is misprinted *vulperaria*, which latter spelling has been adopted by Moore, *Lep. Ceyl.* Vol. 3, p. 439, Aurivillius, *Ent. Tidskr.* Vol. 18, p. 166, etc.

8. *E. aureliata*, Guenée. — India to Solomons.
   a. *Eumelea aureliata aureliata*.
      Eumelea aureliata, Guenée, Spec. Gén. Lép. Vol. 9, p. 394, t. 22, f. 6 (1858).
      Eumelea rosalia, var. (?) *aureliata*, Snellen, in Veth, Midden-Sumatra, Vol. 4 (8), p. 54 (1881); Pagenstecher, Zoologica, Vol. 29, p. 141 (1900).
      Eumelea aureliata, ab. *attenuata*, Warren, Novit. Zool. Vol. 6, p. 326 (1899) (ab.).
   b. *Eumelea aureliata fumicosta* (Warren). — Solomons ? Bismarck Archipelago.
      Eumelea ludovicata fumicosta (1), Warren, Nov. Zool. Vol. 3, p. 357 (1896).
   c. *Eumelea aureliata rubrifusa* (Warren). — Borneo to Solomons, local).
      Eumelea ludovicata rubrifusa, Warren, Novit. Zool. Vol. 3, p. 358 (1896).
   d. *Eumelea aureliata cupreata* (Warren). — Tenimber Islands, New Guinea, New Hanover, etc.
      Eumelea ludovicata cupreata, Warren, Novit. Zool. Vol. 4, p. 29 (1897).

9. *E. unipuncta*, Warren (præc. var.?) (ead. ac. *sanguinifusa* ♀ ?). — Fergusson Island.
   Eumelea unipuncta, Warren, Novit. Zool. Vol. 3, p. 281 (1896).

10. *E. algidaria*, Walker. — Mysol, Waigeu, N. Guinea.
   Eurelea algidaria, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1616 (1866).

11. *E. obesata*, Felder. — Philippines.
   Eumelea obesata, Felder, Reise Novara, Lep. Het. t. 127, f. 34 (1875).
   Eumelea rosalia, var. (?) *obesata*, Snellen, in Veth, Midden-Sumatra, Vol. 4 (8), p. 54 (1881).
   Eumelea obesata, var. *corpulenta*, Thierry-Mieg, Ann. Soc. Ent. Belg. Vol. 43, p. 21 (1899) (ab. ?).

12. *E. genuina*, Kirsch. — New Guinea, Goodenough Island.
   Eumelea genuina, Kirsch, Mitt. Zool. Mus. Dresden, Vol. 1, p. 133, t. 7, f. 13 (1877).
   Eumelea rosalia, [var.] *genuina*, Pagenstecher, Jahrb. Nassau Ver. Vol. 39, p. 155 (1886).
   Eumelea craspedias, Meyrick, Trans. Ent. Soc. Lond. p. 196 (1886).
   Eumelea gemina, Swinhoe, ibidem, p. 643 (1892).

13. *E. degener*, Warren. — Loyalty Islands.
   Eumelea degener, Warren, Novit. Zool. Vol. 1, p. 375 (1894).
   Eumelea degener, ab. *umbrata*, Warren, ibidem, Vol. 3, p. 356 (1896).

14. *E. obliquifascia*, Warren. — Ambonia to New Hanover and Louisiades.
   Eumelea obliquifascia, Warren, Novit. Zool. Vol. 1, p. 375 (1894).

15. *E. sanguinifusa* (Warren). — Fergusson Isl., Solomons.
   Eumelea aureliata sanguinifusa, Warren, Novit. Zool. Vol. 3, p. 281 (1896).

16. *E. praeusta*, Warren. — Moluccas.
   Eumelea praeusta, Novit. Zool. Vol. 3, p. 358 (1896).

17. *E. semirosea*, Warren. — Gilolo.
   Eumelea semirosea, Warren, Novit. Zool. Vol. 4, p. 29 (1897).

18. *E. unilineata*, Warren. — Borneo, Philippines.
   Eumelea unilineata, Warren, Novit. Zool. Vol. 4, p. 387 (1897).

19. *E. apicata*, Warren. — Dutch New Guinea.
   Eumelea rosalia, var., Pagenstecher, Jahrb. Nassau Ver. Vol. 39, p. 155 (1886) (nec Stoll).
   Eumelea apicata, Warren, Novit. Zool. Vol. 6, p. 14 (1899).

20. *E. aurigenaria*, Warren. — Malayasia to Queensland.
   Eumelea aurigenaria, Warren, Novit. Zool. Vol. 6, p. 15 (1899).
   Eumelea fluvata (part.), Swinhoe, Trans. Ent. Soc. Lond. p. 643 (1902) (nec Moore).

21. *E. infulata*, Warren. — Solomon Islands.
   Eumelea infulata, Warren, Novit. Zool. Vol. 12, p. 417 (1905).

22. *E. phoenissa*, Warren. — Great Oby (2).
   Eumelea phoenissa, Warren, Novit. Zool. Vol. 12, p. 418 (1905).

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(1) We transfer this and the two following subspecies here on the authority of Mr. Warren (in litt.).
(2) Warren (in litt.) suggests that this unique form is « perhaps an extreme form of *sanguinata* ».

57. Genus XYRIDACMA, Meyrick

Xyridacma. Meyrick, Trans. New Zeal. Inst. Vol. 20, p. 60 (1888).
Lyrcea (part.). Meyrick, ibidem, Vol. 22, p. 220 (1890) (ex Walker, nec sect. typ.).
Epirranthis (part.). Meyrick, Trans. Ent. Soc. Lond. p. 84 (1892) (ex Hübner, nec sect. typ.).

Characters. — Face not protuberant, with appressed scales. Palpus rather short, second joint rough-scaled, third joint moderate. Tongue developed. Antenna moderately stout, in both sexes nearly simple, pubescent. Thorax hairy beneath. Femora somewhat hairy. Hindtibia with all spurs present, in ♂ somewhat dilated, with hair pencil. Tarsi with scattered spinules. Wing-expanse 35-42 mm. Frenulum present. Forewing with costa slightly arched, apex acute, distal margin crenulate, cell over one-half, discocellulars rather strongly inangled, SC^1 anastomosing with C, SC^2 anastomosing at a point or very shortly with SC^1, and subsequently with SC^{3-4}, SC^{3-5} stalked from before apex of cell, radials normal, M^1 separate from R^3; hindwing with apex cut away at vein C, produced into a strong tooth at SC^2, distal margin not appreciably convex, anal angle squared, cell somewhat over one-half, rather broad, discocellulars inangled, C moderately approximated to SC for some distance towards base, thence gradually diverging, SC usually throwing out, towards base, a knob or short bar which approaches, or even touches the here slightly swollen C, yet without fusion, SC^2 separate from R^1, R^2 from slightly nearer to R^1 than to R^3, usually somewhat deflected at its base, M^1 widely separate from R^3 (**Fig. 7**). ♂ genitalia with uncus short, stout, pointed, articulated to tegumen, « subscaphium » articulated to uncus making a wide « shark's-jaw » opening; harpe somewhat elbowed, costa incurved, narrowly margined with harder chitin, hairy, without armature; « juxta » with upper edge scooped out; bunches of long hair spring from curved bases on either side of the juxta; penis moderately long, slightly widened towards apex, which is pointed.

Fig. 7

Hindwing of *Xyridacma hemipteraria*, Guenée, ♂.

Larva. — Moderately stout, of fairly uniform width throughout, closely resembling the stems of the foodplant *veronica;* anal flap apparently produced (Hudson, *Man. N. Zeal. Ent.* p. 85, t. 11, f. 3*a*; *N. Zeal. Moths and Butt.* t. 3, f. 19).

Pupa. — Unusually robust, with sharp anal spine, pale olive brown, suffused with pink on wing-cases; without cocoon, among dead leaves (Hudson, *Manual,* p. 85).

This genus appears to be closely related to *Xynonia*, with which Meyrick now unites it, and might at option be treated as a subgenus thereof; yet the singular form of the hindwing renders it convenient to keep it provisionallly separate, and the larva (compare Hudson's *Manual*, t. 11, f. 3 with t. 13, f. 7, etc.) suggests that closer study may possibly reveal a less intimate relationship.

Type of the genus : *Xyridacma hemipteraria* (Guenée) = *Hemerophila hemipteraria,* Guenée (1888).

Geographical distribution of species. — New Zealand.

1. *X. hemipteraria* (Guenée). New Zealand.
   Hemerophila hemipteraria, Guenée, Spec. Gén. Lép. Vol. 9, p. 220, t. 6, f. 2 (1858).
   Xyridacma hemipteraria, Meyrick, Trans. N. Zeal. Inst. Vol. 20, p. 60 (1888).
   Lyrcea hemipteraria, Meyrick, ibidem, Vol. 22, p. 220 (1890).
   Ploseria hemipteraria, Hudson, Man. N. Zeal. Ent. p. 85, t. 11, p. 3 (1891).
   Epirranthis hemipteraria, Hudson, N. Zeal. Moths & Butt. p. 80, t. 8, f. 48, 49 (1898).

58. Genus XYNONIA, nov. nom., Prout

Xynonia, nov. nom. Prout.
Lyrcea. Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 259 (1860) (nec Adams, 1854).
Epirranthis (part.). Meyrick, Trans. Ent. Soc. Lond. p. 84 (1892) (ex Hübner, nec sect. typ.)

Characters. — Face not protuberant, with appressed scales. Palpus rather short, slender, second joint rough-scaled, third joint moderate. Tongue developed. Antenna moderately stout, in both sexes nearly simple, pubescent. Thorax hairy beneath. Femora hairy. Hindtibia with all spurs present, in ♂ somewhat dilated with hair-pencil. Tarsi with scattered spinules. Wing-expanse 33-44 mm. Wings rather ample, costa of forewing arched, though less so than in *Epirranthis*, apices more produced than in that genus, distal margins, at least of the hindwing, more or less crenulate. Frenulum present. Forewing with distal margin more or less elbowed at R^3, cell over one-half, SC^1 anastomosing with C, SC^2 anastomosing at a point or very shortly with SC^1 and subsequently with SC^{3-4}, SC^{3-5} stalked from before apex of cell, radials normal, M^1 separate from R^3; hindwing with cell scarcely over one-half, C and SC as in *Xyridacma*, SC^2 separate from R^1, radials normal, discocellulars not inangled, DC^2 little oblique, M^1 widely separate from R^3.

Egg. — Very flat, oval, light green, not further described (Hudson, *Man. N. Zeal. Ent.*, p. 86).

Larva. — Very robust, tapering at extremities, head small, prolegs with semicircle of hooks, the anal pair modified to form flaplike claspers, being flattened along the line of the body, anal flap produced (Hudson, loc. cit., t. 13, f. 7; Marriner, *Trans. N. Zeal. Inst.* Vol. 33, p. 147, t. 6, f. 1, 2, 4).

Pupa. — Rather stout, greenish-brown to dull brown, anal end attenuated, scarcely described, (Hudson, loc. cit.; Marriner, loc. cit. t. 6, f. 3).

This and the preceding genus have been sunk by Meyrick to *Epirranthis*, from which they differ, besides minor distinctions of shape, palpus, antenna, legs, etc., in the relations of C and SC of hindwing. Indeed, were it not for their apparent relationship to *Epirranthis* and their leg-structure, they might with almost equal propriety be referred to our Group III, for they show traces — even more advanced than does our Group II — of the characteristic connective bar. Yet this is here variable, and we have not observed any example where there is actual fusion, while Hudson's figure (*N. Zeal. Moths and Butt.* t. 2, t. 47) shows a specimen without even the beginnings of the bar. Typical *Epirranthis*, in spite of the position assigned by Meyrick and Staudinger, is normal for Group I, only the minutest tooth arising from C opposite SC.

Type of the genus : *Xynonia alectoraria* (Walker) = *Lyrcea alectoraria*, Walker [1860].

Geographical distribution of species. — New Zealand.

1. *X. alectoraria* (Walker). New Zealand.
   Lyrcea alectoraria, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 259 (1860).
   Ploseria alectoraria, Hudson, Man. N. Zeal. Ent. p. 86, t. 11, f. 4 (1891).
   Epirranthis alectoraria, Hudson, N. Zeal. Moths & Butt. p. 80, t. 8, f. 44-47 (1898).
2. *X. ustaria* (Walker) (præc. var.?). New Zealand.
   Ennomos ustaria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1519 (1862).
   Amilapis (?) *achroiaria*, Felder, Reise Novara, Lép. Het. t. 123, f. 6 (1875).
   Lyrcea varians, Butler, Cist. Ent. Vol. 2, p. 496 (1879).
   Lyrcea alectoraria (part.), Meyrick, Trans. N. Zeal. Inst. Vol. 16, p. 95 (1884).
   Epirranthis alectoraria (part.), Hudson, N. Zeal. Moths & Butt. p. 80, t. 8, f. 42, 43 (1898).

59. Genus EPIRRANTHIS, Hübner

Epirranthis. Hübner, Verz. bek. Schmett. p. 296 (1826?).
Ploseria. Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 190 (1840).

Characters. — Face scarcely protuberant, with appressed scales, vertex rougher-scaled. Palpus short, slender, second joint rough-scaled, third joint minute. Tongue developed. Antenna less than one-half length of forewing, rather slender, in ♂ filiform, slightly ciliated, in ♀ more slender, nearly simple, pubescent. Thorax hairy beneath and with short bristly hair above. Femora glabrous. Hindtibia not dilated, all spurs present. Tarsi with scattered spinules. Wings ample. Wings-expanse 30-42 mm. (the ♀ generally the smaller). Frenulum developed. Forewing with costa arched, very strongly so towards base, apex acute, distal margin entire, slightly gibbous about R^3, cell about one-half, discocellulars slightly inbent, DC^3 little oblique, SC^1 anastomosing with C (in one wing of one specimen examined, also in Herrich-Schäffer's figure — *Syst. Bearb. Schmett. Eur.* Vol. 6, t. 10, f. 15 — its base obsolete, so that it appears to *arise out of C*), SC^2 anastomosing at a point or very shortly with SC^1 and subsequently anastomosing at a point or connected with stalk of SC^{3-4}, SC^{3-5} stalked from before apex of cell, radials normal, R^2 somewhat slender, M^1 separate from R^3; hindwing with apex and distal margin rounded, the latter entire, cell about one-half, discocellulars inbent, DC^3 little oblique, C closely approximated to SC for a distance near base but without connection, SC^2 separate from R^1, R^2 rather slender, M^1 separate from R^3. ♂ genitalia with harpe suggesting some affinity with the Geometrine genus *Erannis*, but the tegumen completely different (quite rounded in outline, not triangular as in *Erannis*), subscaphium apparently wanting, penis quite short and stumpy. (No resemblance to genitalia of *Xyridacma*.)

Larva. — Slender, cylindrical, eighth abdominal with a transverse protuberance, head a trifle broader than prothorax, tubercles large, black (Hofmann, etc.).

Pupa. — Rather slender, cylindrical, cremaster short with two crossed terminal spines, and on either side two or three hooklets (Wilde).

Type of the genus : *Epirranthis diversata* (Schiffermüller) = [*Phalaena*] *Geometra diversata*, Schiffermüller = *Epirranthis diversaria*, Hübner (1826?).

Geographical distribution of species. — European.

1. *E. diversata* (Schiffermüller). Europe, except W. and S.

[*Phalaena*] *Geometra diversata* [Schiffermüller], Schmett. Wien, p. 315 (1775).
Phalaena Geometra diversata, G[erni]ng, Frankf. Beytr. Vol. 2, p. 457, cum fig. (1780).
Geometra pulverata, Thunberg, Ins. Suec. Vol. 1, p. 9, cum fig. (1784).
Phalaena aurantiata, Fabricius, Mant. Ins. Vol. 2, p, 201 (1787).
Geometra diversaria, Hübner, Samml. Eur. Schmett, Geom. t. 39, f. 202 (1796?).
Fidonia diversaria, Treitschke, Schmett. Eur. Vol. 5 (2), p. 435 (1825).
Epirranthis diversaria, Hübner, Verz. bek. Schmett. p. 296 (1826).
Fidonia pulverata, Zetterstedt, Ins. Lappon. p. 958 (1838).
Ploseria diversaria, Boisduval, Gen. et Ind. Meth. Eur. Lep. p. 190 (1840).
Ploseria pulverata, Staudinger, Cat. Lep. (ed. 2), p. 160 (1871).
Epirranthis pulverata, Meyrick, Trans. Ent. Soc. Lond. p. 84 (1892)
Epirranthis pulverata, var. *pallidaria*, Wendlandt, Ent. Zeit. Stuttgart: Vol. 22, p. 222 (1909) (var. ?).

60. Genus APLASTA, Hübner

Aplasta. Hübner, Verz. bek. Schmett. p. 304 (1826 ?).

Characters. — Face not protuberant, with moderately appressed scales. Palpus moderate, rather rough-scaled, third joint concealed. Tongue rather short and weak. Antenna in ♂ rather thick, tapering, very shortly and evenly ciliated, in ♀ scarcely more slender, minutely ciliated. Thorax slightly hairy beneath. Femora hairy. Hindtibia not dilated, with all spurs present, but not very long. Tarsi not spinulose. Wings broad, rather thickly scaled. Wing-expanse 20-28 mm. Frenulum wanting (Lederer, *Verh. Zool.-bot. Ges. Wien,* t. 3, f. 23, figures it, but in error). Forewing with apex angled but not acute, anal angle well defined, cell rather short, SC^1 anastomosing moderately with C^1, SC^2 absent, SC^{3-5} stalked from apex of cell, R^3 from above middle of discocellulars, M^1 separate from R^3; hindwing with distal margin slightly rounded, cell rather short, C approximated to SC to beyond half of cell, thence gradually diverging, SC^2 stalked with R^1, R^2 from above middle of discocellulars, M^1 separate from R^3. ♂ genitalia apparently asymmetrical, uncus bilobed or bifurcate and soft, subscaphium not developed; penis long, pointed.

Egg. — Not described.

Larva. — Short and stout, fusiform, tubercles small, the covering of hairs unusually conspicuous for a Geometrid larva, head small, conical. Colour, length of hairs, etc., well assimilated to the food-plant (*Ononis*).

Pupa. — Moderately stout, greenish, vestigial tubercles distinct, nearly black, bearing rather stiff setæ, cremaster strong, with eight well-developed hooks; enclosed in slight cocoon.

An apparently isolated genus, which Meyrick at one time (1892) referred to the *Hemitheinae*, though in his *Handb. Brit. Lep.* p. 251 he has restored it to a position here. The larva seems to bear no relationship to the *Hemitheinae*, while even the position of R^2 is intermediate rather than characteristic of the last-named subfamily. The absence of SC^2 is also noticed in a few other *Œnochrominae*, though apparently these have no close affinity with *Aplasta*.

Type of the genus : *Aplasta ononaria* (Fuessly) = *Phalaena Geometra ononaria*, Fuessly (1826 ?).

Geographical distribution of species. — Palæarctic.

1. *A. ononaria* (Fuessly). S. and Central Europe to Armenia.
   Phalaena Geometra ononaria, Fuessly, Arch. f. Insect. Vol. 3, p. 1. t. 17, f. 1-6 (1783).
   Phalaena Geometra rubellata, Villers, Linn. Ent. Vol. 2, p. 385 (1789).
   Phalaena Geometra rubicapraria, Hübner, Samml. Vög. u. Schmett. p. 12, f. 62 (1792).
   Geometra ononaria, Hübner, Samml. Eur. Schmett. Geom. t. 18, f. 93 (1796 ?).
   Geometra sudataria, Hübner, ibidem, t. 95, p. 492 (1817 ?) (ab.).
   Geometra faecaturia, Hübner, ibidem, t. 97, f. 503 (1818 ?) (var. gen. aest.).
   Cabera ononaria, Treitschke, Schmett. Eur. Vol. 5 (2), p. 438 (1825).
   Aplasta ononaria, Hübner, Verz. bek. Schmett. p. 304 (1826 ?).
   Aplasta ononaria ab. ? (v. ?) *berytaria*, Staudinger, Cat. Lep. (ed. 3), p. 261 (1901) (ab. ?).

61. Genus PETOVIA, Walker

Petovia. Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 559 (1854).
Neurophana. Guenée, Spec. Gén. Lép. Vol. 10, p. 166 (1858).
Xantheliodes. Warren, Novit. Zool. Vol. 4, p. 30 (1897) (nov. syn.).

Characters. — Face smooth. Palpus minute, with moderately appressed stout scales. Tongue rudimentary. Antenna short, rather stout, in ♂ with biseriate short, densely ciliated, clavate pectinations nearly to apex, in ♀ subserrate, pubescent. Thorax somewhat hairy beneath. Legs short. Femora glabrous. Hindtibia not dilated, with terminal spurs only. Tarsi not spinulose. Abdomen robust in ♀. Wings elongate, but with the apices rounded. Wing-expanse 25-39 mm. Frenulum wanting. Forewing with cell rather long, DC^2 nearly vertical, DC^3 inbent anteriorly, then strongly oblique outwards, SC^1 anastomosing or connected with C, SC^2 out of stalk of SC^{3-5}, approaching and often anastomosing at a point with SC^1 (1), R^1 connate or stalked with SC^{2-5}, R^2 from well above middle of discocellulars, M^1 separate from R^3; hindwing with DC^{2-3} much as in forewing, C approximated to SC to nearly one-half of cell, thence gradually diverging, SC^2 stalked with R^1, R^2 from much above middle of discocellulars, sometimes quite close to R^1, M^1 separate from R^3. ♂ genitalia suggesting a relationship with the Geometrine genus *Erannis*, harpe broader, the longitudinal ridge further below centre; uncus simple, articulated to « subscaphium », penis blunt and tapered below.

Larva. — Smooth, nearly cylindrical, not stout, head rather small, distinctly bilobed (see also Fawcett's figure in *Trans. Zool. Soc. Lond.* Vol. 17, p. 184, t. 8, f. 9).

Pupa. — Only known to us from Fawcett's figure (loc. cit. t. 8, f. 10), stout, tapering rapidly at anal end.

This genus bears considerable resemblance in the venation to the subfamily *Hemitheinae*, to which Grünberg would advocate removing it. On the other hand the differences in build, scaling and coloration, and its apparent relationship to *Heliothea* justify its provisional retention here. Even in *Heliothea* the Hemitheine tendencies begin to manifest themselves and it is curious that Meyrick should have removed the genus *Aplasta* to that subfamily (see supra) without also removing *Heliothea*. The larva of *Petovia* does not show the structure of head and prothorax characteristic of typical *Hemitheinae*.

Type of the genus : *Petovia dichroaria* (Herrich-Schäffer) = *Geometra dichroaria*, Herrich-Schäffer = *Petovia marginata*, Walker (1854).

Geographical distribution of species. — Æthiopian.

1. *P. dichroaria* (Herrich-Schäffer). — S. Africa.
   Geometra dichroaria, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, t. 39, f. 189 (1854).
   Petovia marginata, Walker, List Lep. Ins. Brit. Mus. Vol. 2, p. 560 (1854) (ab.) (nom. vetust. ?).
   Neurophana dichroaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 167 (1858).
   Neurophana incertaria, Guenée, ibidem p. 167, t. 20, f. 10 (1858) (ab.).
   Neurophana amatonga, Vuillot, Bull. Soc. Ent. Fr. Vol. 61, p. 194 (1892); Nov. Lep. (12), p. 160, t. 22, f. 6 (1895) (ab.).
2. *P. uniformis* (Warren). — S. E. Africa.
   Xantheliodes uniformis, Warren, Novit. Zool. Vol. 4, p. 31 (1897).
3. *P. patris-aloysii*, Grünberg, (præc. var. ?). — German E. Africa.
   Petovia patris-aloysii, Grünberg, Berl. Ent. Zeitschr. Vol. 52, p. 63 (1907).

Note. — « *Neurophana* » *charax*, Druce, *Ann. Mag. Nat. Hist.* (6), Vol. 17, p. 352 (1896) does not belong to the *Geometridæ*, sec. specim. typ.

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(1) Apparently the base of SC^2 is sometimes obsolete (as in *Alex* and some of the *Achlora* group), causing it to arise out of SC^1; see Grünberg, *Berl. Ent. Zeitschr.* Vol. 52, p. 65, f. 1.

62. Genus HELIOTHEA, Boisduval

Heliothea (Rambur, MS.). Boisduval, Gen. et Ind. Meth. Lep. Eur. p. 178 (1840).

Characters. — Face smooth, forehead rough-haired. Palpus moderate or rather short, with long rough hairs, third joint concealed. Tongue weak. Antenna rather short, stout, in ♂ bipectinate to apex with rather long subclavate pectinations, in ♀ very shortly bipectinate (long serrations, **Fig. 8**). Thorax hairy beneath. Legs rather short. Femora somewhat hairy. Hindtibia not dilated, without median spurs. Tarsi not spinulose. Wing-expanse 22-27 mm. Frenulum wanting. Forewing with costa nearly straight, distal margin slightly curved, oblique, cell slightly over one-half, DC^3 incurved anteriorly, then somewhat oblique outwards (1), SC^{1-2} long-stalked, very shortly connected with C (or, SC^1 out of C, anastomosing immediately and very strongly with SC^2), SC^2 closely appressed for a distance to SC^{3-4} (according to Meyrick sometimes connected), SC^{3-5} stalked from apex of cell, R^2 arising slightly nearer to R^1 than to R^3, M^1 separate from R^3; hindwing with distal margin little convex, apex therefore subprominent, cell and discocellulars much as in forewing, C closely appressed to SC to half of cell, SC^2 short-stalked with R^1, R^2 from nearer to R^1 than to R^3 (1), M^1 separate from R^3 (**Pl. 2, Fig. 7**). ♂ genitalia with harpe quadrate, apex of « sacculus » with a double spined termination; bearing on the outer edge a globular body covered with spines, uncus long and thin, articulated to « subscaphium ».

Fig. 8

Section of antenna of *Heliothea discoidaria*, Boisduval, ♀.

Larva. — Nearly cylindrical, without protuberances, slightly attenuated at the extremities, head small, spherical, coralliform, separated from prothorax, tubercles small, setæ minute (Millière, *Icon. Chen.* Vol. 1. p. 315, t. 37, f. 4, 5).

Pupa. — Cylindro-conical, smooth, anal extremity obtuse, with several small hooks; in a slight cocoon (Millière, loc. cit.).

Type of the genus : *Heliothea discoidaria*, Boiduval (1840).

Geographical distribution of species. — Spain and Central Asia.

1. *H. discoidaria*, Boisduval. — Spain.
   Heliothea discoidaria, Boisduval, Gen. et Ind. Meth. Lep. Eur. p. 178 (1840).
   Minoa discoidaria, Heydenreich, Lep. Eur. Cat. Meth. (ed. 3), p. 59 (1851).
2. *H. iliensis*, Alphéraky.
   a. *Heliothea iliensis iliensis*. — Turkestan.
      Heliothea iliensis, Alphéraky, Hor. Soc. Ent. Ross. Vol. 17, p. 189, t. 9, f. 88 (1883).
      Heliothea iliensis ab. *alphérakii*, Staudinger, Iris, Vol. 5, p. 207 (1892) (ab.).
      ? *Heliothea christophi*, Alphéraky, Hor. Soc. Ent. Ross. Vol. 17, p. 191, t. 9, f. 90 (1883) (ab. ?).
   b. (?) *Heliothea iliensis herzi*. — Zerafshan district.
      Heliothea iliensis var. (?) *herzi*, Staudinger, Cat. Lep. (ed. 3) p. 358 (1901).

63. Genus CORTIXA (HIC PONENDA ??), Schaus

Cortixa. Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 276 (1901).

Characters. — Palpus minute. Antenna simple. Hindtibia with a single pair of spurs. Fore-

(1) Especially in *iliensis*, which in some respects seems transitional between the present genus and *Petrodia*.

wing with costa convex before apex, distal margin oblique, tornus rounded, C free, SC^{1-2} stalked, SC^{3-5} stalked from before apex of cell, radials normal, M^1 separate from R^3; hindwing with distal margin rounded, C free, somewhat approximated to SC towards middle of cell, SC^2 connate with R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

A genus of quite uncertain location. It is at present only known to us from the imperfect characterization by Schaus, who refers it to the *Orthostixinae* (our Group III) concerning which Dr. Dyar (in litt.) says : « I have examined *Cortixa aurudaria*, Schaus, and consider that it is not an Orthostixine. Vein 8 (C) of the hindwings is entirely free from the cell. It falls in the *Brephinae* by Hulst's table of subfamilies, but I do not believe it belongs there. I do not know where to put it. The single type has lost both the hindlegs, and I am inclined to think Schaus in error in his statement about the spurs on the hindtibiæ ».

Type of the genus : *Cortixa aurudaria*, Schaus (1901).

Geographical distribution of species. — Neotropical.

1. *C. aurudaria*, Schaus. Peru.
Cortixa aurudaria, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 276 (1901).

64. Genus ODEZIA, Boisduval

Odezia. Boisduval, Gen. et Ind. Meth. Lep. Eur. p. 229 (1840); Herrich-Schäffer, Samml. Aussereur. Schmett. p. 25, 35 (1856).

Tanagra. Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 112 (1829) (nec Linné, 1764).

Baptria. Meyrick, Trans. Ent. Soc. Lond. p. 80 (1892) (ex Hübner, nec sect. typ. Herrich-Schäffer restr.).

Characters. — Face with projecting scales. Palpus moderate, second joint with rough hair-scales, third joint moderate. Tongue developed. Antenna rather short, in ♂ with close, short, even ciliation, in ♀ simply pubescent. Thorax hairy beneath. Femora glabrous. Hindtibia not dilated, all spurs present. Tarsi not spinulose. Wing-expanse 23-32 mm. Wings somewhat rounded at apices. Frenulum present. Forewing with cell about one-half, C free, SC^{1-2} stalked, SC^2 shortly appressed to, or anastomosing shortly with SC^{3-4}, SC^{3-5} stalked from apex of cell, radials normal. M^1 separate from R^3; hindwing with cell short, C closely appressed to SC nearly throughout the distal half of cell, SC^2 stalked with R^1, radials normal, M^1 separate from R^3. ♂ genitalia with uncus stout, not unlike *Gypsochroa*, on either side two hard triangular plates, perhaps hinged to the tegumen; harpe broad, with strong lobe on costa, not unlike *Gypsochroa;* penis long and thin, no armature discoverable.

Egg. — Unlike any other yet known. Flattened at micropylar end, and with two remarkable sulci, one on either side (Chapman, *Ent. Rec.* Vol. 20, p. 223).

Larva. — Slender, nearly cylindrical, without protuberances, variable in colour, green or various shades of brown, dark-marked dorsally, a pale or whitish lateral flange; four instars (Life-history fully described by Chapman, *Ent. Rec.* Vol. 20, p. 260).

Pupa. — Light-brown, normally shaped, fairly circular in outline, wing-veins prominent, a buttonlike spiracle-cover on prothorax, anal-armature two sharp spines. (Fully described by Chapman, loc. cit., p. 263.)

Another genus of uncertain affinities, having almost as much in common with the *Larentiinae* (with which is was formerly placed) as with the *Œnochrominae*, yet distinguished from the former by the non-anastomosis of C with SC in the hindwing, and probably also by its early stages.

Type of the genus : *Odezia atrata* (Linné) = *Phalaena Geometra atrata*, Linné = *Odezia chaerophyllaria*, Boisduval (1840) (1).

Geographical distribution of species. — Palæarctic.

1. *O. atrata* (Linné). Europe to E. Siberia.

Phalaena Geometra atrata, Linné, Syst. Nat. (ed. 10), Vol. 2, p. 524 (1758).
Phalaena Geometra chaerophyllata, Linné, ibidem (ed. 12), Vol. 1 (2), p. 866 (1767).
Geometra chaerophyllata, Hübner, Samml. Eur. Schmett. Geom. Vol. 38, p. 196 (1796?).
Minoa chaerophyllata, Treitschke, Schmett. Eur. Vol. 5 (2), p. 445 (1825).
Baptria chaerophyllaria, Hübner, Verz. bek. Schmett. p. 306 (1826?).
Tanagra chaerophyllata, Duponchel, Hist. Nat. Lép. Vol. 7 (2), p. 113 (1829).
Odezia chaerophyllaria, Boisduval, Gen. et Ind. Meth. p. 229 (1840).
Chesias chaerophyllaria, Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 183 (1848).
Torula chaerophyllaria, Heydenreich, Lep. Eur. Cat Meth. (ed. 3), p. 53 (1851).
Odezia chaerophyllata, Lederer, Verh. Zool.-bot. Ges. Wien, Vol. 3, p. 181 (1853).
Odezia atrata, Snellen, Vlind. Ned., Macrolep, p. 511 (1867).
Odezia atrata, var. *pyrenaica* (Graslin, M S.), Gumppenberg, Nov. Act. Acad. Germ. Vol. 49, p. 364 (1887) (ab.?; an var.?).
Odezia atrata, var. *costai*, Calberla, Iris. Vol. 3. p. 82 (1890) (ead. ac præc.).
Baptria atrata, Meyrick, Trans. Ent. Soc. Lond. p. 80 (1892).

65. Genus GYPSOCHROA, Hübner

Gypsochroa. Hübner, Verz. bek. Schmett. p. 336 (1826?); Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 33 (1847).
Orthostixis (part.). Meyrick, Trans. Ent. Soc. Lond. p. 83 (1892) (ex Hübner, nec sect. typ.).

Characters. — Face slightly prominent, with appressed scales. Palpus rather short and slender, second joint rough-scaled, third joint minute, pointed. Tongue developed. Antenna about two-thirds the length of forewing, in ♂ with segments somewhat thickened, finely and evenly ciliated, in ♀ similar but not thickened, cilia rather sparse. Thorax glabrous beneath. Legs long and slender. Femora glabrous. Hindtibia not dilated, without median spurs, terminals very short. Tarsi not spinulose. Abdomen slender. Wing-expanse 26-30 mm. Wings rather narrow, with smooth, glossy scaling. Frenulum developed. Forewing with costa nearly straight, apex acute, distal margin oblique, cell rather long, discocellulars short, C reaching costal margin rather far distad, SC^1 anastomosing strongly with C and then shortly with SC^{3-4}, SC^2 absent, $SC^{3\,5}$ stalked from before end of cell (2), radials normal, M^1 separate from R^3; hindwing with anal angle rounded off, cell somewhat over one-half, C closely approximated to SC to one-half of cell, SC^2 separate from or connate with R^1, radials normal, M^1 separate from R^3 (**Pl. 1, Fig. 8**). ♂ genitalia showing no affinity at all with *Orthostixis*, with which Meyrick unites

(1) Proposed, apparently, as nov. nom. for *Tanagra*, Duponchel, which is expressly said to be preoccupied; hence co-typical therewith. Even if this be not the case, Herrich-Schäffer's restriction in 1856 gives the same result.

(2) The subcostal venation of this genus is susceptible of various interpretations. Judged by position, it should perhaps be the costal end of C that should be considered as wanting, in which case SC^{1-2} would be stalked, their stalk becoming coincident with C, and SC^2 subsequently anastomosing with SC^{3-4}.

Gypsochroa, nor with *Derambila*, of which the structure is in a few respects somewhat suggestive; uncus long and thin, subscaphium wanting, harpe bilobed, truncate and cleft, bearing about the centre a three-pronged clasper, a blunt arm (possibly the base), a short forked and a long curved two-pointed one; penis curved, with two marginal points.

Early stages unknown.

Type of the genus : *Gypsochroa renitidata* (Hübner) = *Geometra renitidata*, Hübner (1847).

Geographical distribution of species. — Palæarctic.

1. *G. renitidata* (Hübner). S. E. Russia to Asia Minor, ? S. France.

Geometra renitidata, Hübner, Samml. Eur. Schmett. Geom. t. 94. f. 485-486 (1818?).
Gypsochroa renitidata, Hübner, Verz. bek. Schmett. p. 337 (1826?).
Siona renitidaria, Boisduval, Gen. et Ind. Meth. Lep. Eur. p. 228 (1840).
Minoa renitidata, Eversmann, Fauna Lep. Volg.-Ural. p. 435 (1844).
Gypsochroa renitidaria, Herrich-Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 33 (1847).
Minoa renitidaria, Heydenreich, Lep. Eur. Cat. Meth. (ed. 3), p. 59 (1851).
Orthostixis renitidata, Meyrick, Trans. Ent. Soc. Lond. p. 83 (1892).

Group II

66. Genus DERAMBILA, Walker

Derambila. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1630 (1862).
Zanclopteryx, sect. II. Guenée, Spec. Gén. Lép. Vol. 10, p. 16 (1858) (nec Herrich-Schäffer).
Chionopteryx. Snellen, Tijdschr. v. Ent. Vol. 16, p. 72 (1873).
Rambara. Moore, Lep. Ceyl. Vol. 3, p. 458 (1887).

Characters. — Face smooth. Palpus moderate, slender, second joint shortly rough-scaled, third joint short. Tongue developed. Antenna long, usually nearly as long as forewing, the joints, entirely or in part, with plates of scales projecting obliquely at distal end, antenna of ♂ ciliated, the cilia sometimes long (Section II), of ♀ slightly pubescent. Thorax glabrous beneath. Legs very long and slender. Femora glabrous. Hindtibia of ♂ more or less dilated, with hair-pencil, median spurs wanting in both sexes, terminals very minute, perhaps wanting in the ♂ sex of some species. Tarsi not spinulose. Abdomen long and slender. Wing-expanse 12-29 mm. Wings thinly and smoothly scaled, iridescent. Frenulum present. Forewing with apex acute, often falcate, cell moderate or rather long, SC^1 from cell, becoming coincident with C, which runs very close to SC^{3-4}, SC^2 absent, SC^{3-5} stalked from well before apex of cell, radials normal, M^1 remote from R^3; hindwing with distal margin rounded, anal angle pronounced, C approximated to SC near base, and here thickened, but without contact, thence rapidly diverging (1), SC^2 stalked with R^1 (except in three species, our Section II), R^2 normal, M^1 separate from R^3. ♂ genitalia (*saponaria*) with uncus short (?); harpe elongate, fragile, one long central spine and a smaller inner one, scobinated at the base; other long, curved, pointed spines of doubtful origin; penis long, stout, toothed at sides of upper half, vesica with a number of large stout spines and many smaller ones.

(1) Except in one or two narrow-winged forms, such as *thearia*, Swinhoe.

Early stages unknown.

This genus, formerly confused with the South American *Zanclopteryx*, differs from it in venation, though otherwise remarkably close. It contains at least two well-marked sections, which could easily be treated as genera. Snellen's little-known *alucitaria* (*Chionopteryx*) may perhaps form a third section, on account of its more extremely attenuated proportions and curiously curved hindtibia (apparently without hair-pencil, though its *lower* part is indicated as fringed with fine hair); cfr. Snellen, *Tijdschr. v. Ent.* Vol. 20, p. 75.

Type of the genus : *Derambila punctisignata*, Walker (1862).

Geographical distribution of species. — Indo Australian and Æthiopian.

SECTION I. — Hindwing with SC^2 and R^1 stalked; ♂ antenna with projecting scales usually well developed and cilia not long.

1. *D. punctisignata*, Walker. — W. Africa.
   Derambila punctisignata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1630 (1862).
2. *D. alucitaria* (Snellen). — Prince Island.
   Chionopteryx alucitaria, Snellen, Tijdschr. v. Ent. Vol. 16, p. 72, t. 4, f. 1-5 (1873).
3. *D. thearia* (Swinhoe). — Cameroons.
   Rambara thearia, Swinhoe, Trans. Ent. Soc. Lond. p. 576 (1904).
4. *D. costipunctata*, Warren. — Sierra Leone.
   Derambila costipunctata, Warren, Novit. Zool. Vol. 12, p. 383 (1905).
5. *D. marginepunctata*, Bastelberger. — Angola.
   Derambila marginepunctata, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 2, p. 281 (1909).
6. **D. synecdema, nov. sp.** (1), Prout. — Cameroons.
7. *D. lumenaria* (Geyer). — India to Malaysia.
   Arrhostia lumenaria, Geyer, Hübner Zutr. Exot. Schmett. Vol. 4, p. 35, f. 757, 758 (1837).
   Acidalia lumenaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 488 (1858).
   Zanclopteryx zincaria, Snellen, Tijdschr. v. Ent. Vol. 20, p. 76 (1877) (nec Guenée).
   Rambara saponaria, Moore, Lep. Ceyl. Vol. 3, p. 459, t. 203, f. 8 (1887) (nec Guenée)
   Rambara ochreicostalis, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 9, p. 40, 150, t. 169, f. 21 (1893).
   Rambara costata, Warren, Novit. Zool. Vol. 3, p. 101 (1896) (*costalis*, Hampson, ex err. Journ. Bombay Nat. Hist. Soc. Vol. 11, p. 724).
   Rambara maculata, Warren, MS. (in coll. Brit. Mus.).
8. *D. saponaria* (Guenée) (præc. form. ?). — India with Ceylon, Malaysia, Formosa.
   Zanclopteryx saponaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 16 (1858) (ex Herrich-Schäffer MS.).
   Acidalia (??) *zanclopterata*, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1609 (1862).
   Zanclopteryx fragilis, Butler, Proc. Zool. Soc. Lond. p. 687 (1880) (var. ?).
   Rambara saponaria (part.), Cotes & Swinhoe, Cat. Moths India (4), p. 581 (1888); Hampson, Fauna Ind. Moths, Vol. 3, p. 326 (1895).

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(1) **Derambila synecdema, nov. sp.** — ♂ ♀, 25-27 mm. Face white. Thorax and abdomen whitish, abdomen with large dark fuscous dorsal spots. Forewing somewhat falcate, almost of the shape of *lumenaria*, perhaps slightly narrower; white, marked as in *lumenaria*, costal margin light brown, the costa itself somewhat fuscous; discal dot small but very distinct, black. Hindwing not broad, rounded at apex; white, marked nearly as in *lumenaria*, but with postmedial line reaching inner margin much further distad, and with a very distinct black distal dot. Underside of both wings more weakly-marked, the discal and marginal dots moderately distinct. Bitye, Ja River, Cameroons, 2000 feet, ♂ Nov. 1907 (wet season) (*type*), ♀ Dec. 1907 to March 1908 (dry). Type and co-types in coll. L. B. Prout.

9. **D. adaucta, nov. sp.** (1), Prout. — Ceylon.
Rambara saponaria (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 326 (1895) (nec Guenée).

10. *D. infelix* (Swinhoe). — Deccan.
Zanclopteryx infelix, Swinhoe, Proc. Zool. Soc. Lond. p. 858, t. 56, f. 13 (1885).
Rambara infelix, Hampson, Fauna Ind. Moths, Vol. 3, p. 326 (1895).

11. *D. aetherialis* (Butler). — New Guinea to Solomons.
Zanclopteryx aetherialis, Butler, Ann. Mag. Nat. Hist. (5), Vol. 20, p. 246 (1887).

12. *D. colorata* (Warren). — Tenimber Islands.
Rambara colorata, Warren, Novit. Zool. Vol. 3, p. 359 (1896).

13. *D. strigicosta* (Warren). — New Guinea.
Rambara strigicosta, Warren, Novit. Zool. Vol. 10, p. 349 (1903).

14. *D. catharina*, nov. nom., Prout. — Queensland.
Zanclopteryx permensata, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 6, p. 674 (1892) (nec Walker).

SECTION II. — Hindwing with SC^2 and R^1 not stalked (2); ♂ antenna with projecting scales little developed, cilia long.

15. *D. zincaria* (Guenée). — Burma, Malaysia, New Guinea, ? N. Australia.
Zanclopteryx zincaria, Guenée, Spec. Gén. Lép. Vol. 10, p 16 (1858).
Zanclopteryx permensata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1619 (1862) (var. ?).
Zanclopteryx guttilinea, Walker, ibidem, Vol. 35, p. 1635 (1866).
Rambara zincaria, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 330 (1900).

16. *D. melagonata* (Walker). — Malaysia, New Guinea.
Zanclopteryx zincaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 810 (1861) (nec Guenée).
Zanclopteryx melagonata, Walker, ibidem, Vol. 26, p. 1619 (1862).
Rambara melagonata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 329 (1900).

17. *D. satelliata* (Walker). — N. India to New Guinea.
Zanclopteryx satelliata, Walker, List Lep. Ins. Brit. Mus, Vol. 35, p. 1636 (1866).
Rambara dentifera, Moore, Lep. Coll Atkinson, p. 256 (1888).
Rambara efila, Swinhoe, Trans. Ent. Soc. Lond. p. 168 (1894).
Rambara satelliata, Hampson, Fauna Ind. Moths, Vol. 3, p. 327 (1895).

18. *D. dentiscripta* (Bastelberger). — Moluccas.
Rambara dentiscripta, Bastelberger, Soc. Ent. Zürich, Vol. 24, p. 65 (1909).

67. GENUS BARRAMA, WARREN

Barrama. Warren, Novit. Zool. Vol. 4, p. 28 (1897).

Characters. — Face smooth. Palpus moderate, slender, shortly rough-scaled, third joint short. Tongue developed. Antenna rather long, in ♂ dentate, with fascicles of fine long cilia, in ♀ with tufts

(1) **Derambila adaucta, nov. sp.** — ♀, 15-18 mm. Similar to *saponaria*, Guenée, which also occurs in Ceylon, and just possibly an extraordinary aberration of that species, though the differences (particularly in abdomen and terminal dots) seem too significant. Size and shape of *saponaria*. A large and very conspicuous dorsal black spot on abdomen (in *lumenaria* and *saponaria* such a spot is sometimes discoverable, but it is less large, less black and never very conspicuous; when Hampson used this mark to differentiate *saponaria* from *lumenaria* he must have had before him as *saponaria* — or mixed therewith — an example of *adaucta*). The markings much larger than in *saponaria*, forewing with discal spot as large as in *melagonata*, four large brown spots posteriorly to it (the inner marginal two of first and second lines) closely approximated, hindwing with discal spot greatly enlarged to a pale-centred blotch from SC to M, somewhat horseshoe-shaped. Terminal dots grey, not black, except those between M^2 and SM^2 of both wings and between C and SC of hindwing, which are rather large and conspicuous, whereas in the allied species *all* the terminal dots are black and uniform. Type, Puttalam, Ceylon, in coll. Br. Mus.; three other specimens, also from Ceylon, in coll. Br. Mus. et Oxf. Mus.

(2) This section could be subdivided. In *zincaria* and *melagonata* the hindtibia is much dilated and strongly fringed with hair throughout, the hindtarsus shortened, SM^2 separate from R^1; in *satelliata* the hindtibia and hindtarsus are normal, SC^2 usually connate with R^1.

of projecting scales, much as in the allied genera. Thorax glabrous beneath. Legs long and slender. Femora glabrous. Hindtibia not dilated, without hair-pencil, median spurs wanting, terminals rather short. Abdomen not attenuated. Wing-expanse 20-25 mm. Wings rather long and narrow, more thickly scaled than in *Derambila*, not iridescent. Frenulum present. Forewing with the apex produced, but not falcate, SC^1 from cell, becoming coincident with C, C anastomosing at a point with SC^{3-4} (1), SC^2 absent, SC^{3-5} stalked from before apex of cell, radials normal, M^1 remote from R^3; hindwing with inner angle rounded, C approximated to SC near base, SC^2 stalked with R^1, R^2 normal, M^1 separate from R^3.

Early stages unknown.

Apparently a South African representative of *Derambila*, differing only in minor points, such as ♂ antenna, shape and texture of wings, build of abdomen, etc.

Type of the genus : *Barrama impunctata*, Warren (1897).

Geographical distribution of species. — South African.

1. *B. impunctata*, Warren. Natal.
Barrama impunctata, Warren, Novit. Zool. Vol. 4, p. 28 (1897).

68. Genus CORIUM, nov. gen., Prout

Corium, nov. gen. Prout.

Characters. — Face with appressed scales. Palpus moderate, rough-scaled, third joint short. Tongue developed. Antenna long, in ♂ minutely ciliated, distal joints with projecting scales, though not extremely developed. Thorax nearly glabrous beneath. Legs very long and slender. Femora glabrous. Hindtibia in ♂ dilated, with hair-pencil, median spurs wanting, terminals very minute. Abdomen slender, very little longer than inner margin of hindwing. Wing-expanse 22-27 mm. Wings thinly and smoothly scaled, iridescent. Frenulum present. Forewing with costa nearly straight, apex acutely produced, distal margin nearly straight, oblique, cell rather long, eleven veins, C not abnormally close to SC, SC^1 from base of stalk of SC^{3-5}, anastomosing strongly with C, afterwards appressed to or anastomosing shortly with SC^{3-4}, SC^2 absent, SC^{3-5} stalked from before apex of cell, radials normal, M^1 well separated from R^3; hindwing with costa long, distal margin faintly waved, scarcely rounded from R^1 to M^2, apex thus appearing somewhat produced, though roundly, anal angle moderate, cell about one-half, C approximated to SC near base, thence diverging gradually at first, more rapidly afterwards, SC^2 stalked with R^1, R^2 normal, M^1 separate from R^3.

Early stages unknown.

Clearly an offshoot of *Derambila*, scarcely differing essentially except in the subcostal venation of the forewing, which makes an approach to that of the Neotropical genus *Zanclopteryx*.

Type of the genus : *Corium puella* (Butler) = *Zanclopteryx puella*, Butler.

Geographical distribution of species. — Æthiopian.

1. *C. puella* (Butler). Madagascar.
Zanclopteryx puella, Butler, Ann. Mag. Nat. Hist. (5), Vol. 5, p. 391 (1880).
[*Rambara*] *Derambila puella*, Warren, Novit. Zool. Vol. 12, p. 382 (1905).

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(1) This has not been observed in any specimen of *Derambila* which we have examined, but might easily occur, since C always runs very close to SC^{3-4} in that genus.

2. *C. larula* (Bastelberger) (præc. ab?; an syn.?) Madagascar.
Derambila larula, Bastelberger, Intern. Ent. Zeit. Guben. Vol. 2, p. 281 (1909).
3. *C. syllaria* (Swinhoe) (huj. gen.?) (1). Sierra Leone.
Rambara syllaria, Swinhoe, Trans. Ent. Soc. Lond. p. 575 (1904).

69. Genus HOLOSTIXA, Swinhoe

Holostixa. Swinhoe, Trans. Ent. Soc. Lond. p. 644 (1902).

Characters. — Face with appressed scales. Palpus moderate, second joint hairy, third joint nearly as long as second. Tongue developed. Antenna about three-fourths, in ♂ moderately ciliated, in ♀ almost simple. Thorax somewhat hairy beneath. Fore and hindfemora hairy in ♂, nearly glabrous in ♀. Foretibia in ♂ short, hairy. Foretarsus very long, its first two joints in ♂ densely clothed on both sides with long erect hair. Hindtibia of ♂ much dilated, with very strong pencil of long hairs, spurs wanting; tarsus rather short. Hindtibia of ♀ with a pair of extremely minute terminal spurs. Wing-expanse 29-32 mm. Frenulum present. Forewing with apex pronounced but not falcate, distal margin in ♂ sharply elbowed at R^2, in ♀ quite normal, SC^2 wanting, SC^1 from base of stalk of SC^{3-5}, running into C, C closely approximated to SC^{3-4}, SC^{3-5} stalked from well before apex of cell, radials normal, M^1 separate from R^3; hindwing in ♂ aborted anteriorly, apex acute, costa deeply inbent midway between discocellulars and apex, somewhat puckered, the indentation long-fringed, SC^2 and R^1 separate, both bent, SC^2 terminating in the infolding of costal margin, R^1 curved round it, R^2 slightly bent upward in its outer half, M^1 separate from R^3; hindwing in ♀ with SC^2 and R^1 normal, separate, R^2 not bent; SC of hindwing in both sexes making a sharp angle upwards near base and there thickened so as to touch C, but without fusion.

Early stages unknown.

Another offshoot of *Derambila*, distinguished, apart from the curious secondary sexual characters, by somewhat more hairy palpus, pectus and legs, slightly thicker scaling, and superficially by a different wing-pattern; from the typical section of *Derambila* also by the non-stalking of SC^2 with R^1 in hindwing.

Type of the genus : *Holostixa manca*, Swinhoe (1902).

Geographical distribution of species. — Borneo.

1. *H. manca*, Swinhoe. Borneo.
Holostixa manca, Swinhoe, Trans. Ent. Soc. Lond. p. 644 (1902).

70. Genus ZANCLOPTERYX, Herrich-Schäffer

Zanclopteryx. Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1 (Lief. 13-17 [1855] indescr.), p. 26 (1856).

Gasmara. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1634 (1862).

Characters. — Face smooth. Palpus moderate or rather long, second joint rough-scaled, third joint moderate, distinct. Tongue developed. Antenna long, the joints (at least the apical ones) with distally projecting scales, antenna of ♂ usually with fascicles of rather long cilia, of ♀ more or less

(1) Falls here by the venation, SC^1 not terminating in C, but anastomosing very strongly therewith and afterwards moderately with stalk of SC^{3-4}. But differs rather markedly in shape, distal margin of forewing being concave below apex, then strongly convex, anal angle of hindwing rounded, etc.

pubescent. Thorax nearly glabrous beneath. Legs rather long, slender. Femora glabrous. Hindtibia somewhat dilated in ♂, with hair-pencil, in both sexes with a pair of very short terminal spurs, medians wanting. Abdomen slender. Wings thinly and smoothly scaled. Wing-expanse 16-27 mm. Frenulum developed. Forewing with apex acute, sometimes falcate, cell just over one-half, SC^1 out of C, touching or anastomosing with SC^{3-4}; SC^2 anastomosing strongly or long-stalked with SC^1, or sometimes absent (1), SC^{3-5} stalked from considerably before apex of cell, radials normal, M^1 well removed from R^3; hindwing with cell just over one-half length of wing, C appressed to SC at the upward curve of the latter near base, and occasionally (*conspersa*) subparallel for a short distance later, then diverging rapidly, SC^2 stalked with R^1, sometimes almost connate, radials normal, M^1 well removed from R^3.

Early stages unknown.

Clearly a Neotropical representative of the Eastern *Derambila*. Perhaps the South American species really represent two or more genera or subgenera, as there is certainly variability in the subcostal venation, as well as in the shape of wing, etc. But insufficient material is yet accessible to justify a decision as to the significance of these variations. In the type-species (2) all the veins are present.

Type of the genus : *Zanclopteryx aculeataria,* Herrich-Schäffer (1856).

Geographical distribution of species. — Neotropical.

1. *Z. aculeataria*, Herrich-Schäffer. — Brazil.
   Zanclopteryx aculeataria, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, t. 59, f. 330 (1855); p. 26 (1856).
2. **Z. mexicana, nov. sp.** (3), Prout (præc. subsp.?). — Mexico.
   Zanclopteryx aculeataria, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 123 (1892) (indescr.) (nec Herrich-Schäffer).
3. *Z. uniferata* (Walker). — Centr. America to N. Brazil.
   Gasmara uniferata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1634 (1862).
   Zanclopteryx aculeataria (part.), Butler, Trans. Ent. Soc. Lond. p. 344 (1881) (nec Herrich-Schäffer).
4. *Z. floccosa*, Warren. — Surinam.
   Zanclopteryx floccosa, Warren, Novit. Zool. Vol. 4, p. 418 (1897).
5. *Z. subsimilis*, Warren. — Panama, Venezuela, Trinidad.
   Zanclopteryx subsimilis, Warren, Novit. Zool. Vol. 4, p. 418 (1897).
6. *Z. venata*, Warren. — Peru to Surinam.
   Zanclopteryx venata, Warren, Novit. Zool. Vol. 4, p. 419 (1897).
7. *Z. conspersa*, Warren. — Brazil.
   Zanclopteryx conspersa, Warren, Proc. U. S. Nat. Mus. Vol. 34, p. 93 (1908).
8. **Z. punctiferata, nov. sp.** (4), Prout. — Brazil.

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(1) We have observed its absence in *floccosa*, in the specimen which Warren refers as the ♀ to his *venata* (his ♂ type has twelve veins) and in some examples, at least, of *subsimilis*. Probably there is variation within the limits of a single species, as in many *Geometrinae*.

(2) It is not absolutely certain that the species which passes as *aculeataria*, and which occurs in Parana, etc., is really that of Herrich-Schäffer, as his figure shows an abnormally falcate winged ♀; but his description of the venation agrees with this. His indications of four spurs and of bipectinate ♂ antenna are in any case inapplicable to any member of the genus.

(3) **Zanclopteryx mexicana, nov. sp.** (an subsp. ?). -- ♂ ♀, 23-26 mm. Structural characters as in *aculeataria* (Parana form), except that hindtibial spurs are somewhat less minute, and that SC^2 of hindwing is rather longer-stalked with R^1. Differs further from that species (or subspecies) in being more strongly speckled with light brown, costa of forewing and distal margin of both wings without the dark lines, distal margins, on the other hand, with distinct series of black dots between the veins. Dos Arroyos, Guerrero, Mexico, 1000 feet. Types (♂, ♀) in coll. Br. Mus., ex coll. Godman and Salvin.

(4) **Zanclopteryx punctiferata, nov. sp.** — ♀, 20 mm. Face, thorax, abdomen and legs white. Forewing with apex acutely produced; all veins present, SC^2 anastomosing with SC^{3-4}. Wings white, somewhat iridescent, faintly speckled with grey-brownish distally. Forewing with inner line wanting, outer consisting of a row of light grey-brown spots on veins SC^5 to SM^2, that on SC^5 small, near apex, that on SM^2 diffuse, at three-fifths of inner margin, the intermediate ones first indicating a faint curve distally, then running obliquely to that on SM^2; cell-spot rather large, blackish: costa narrowly brown; termen with a row of black dots between the veins; fringe unmarked. Hindwing with two lines of dots on the veins, the first at one-half, crossing the cell-spot, the second midway between this and termen; cell-spot, terminal dots and fringe as in forewing. Underside similar, the markings weaker, except cell-spots and terminal dots. Santa Marta, Brazil (P. Bouchard). Type in coll. Br. Mus.

71. Genus ZANCLORHACOS, Bastelberger

Zanclorhacos. Bastelberger. Intern. Ent. Zeit. Guben, Vol. 2, p. 267 (1909).

Characters. — Palpus porrect, very long, first joint extending beyond the head, second joint as long as first, third joint quite short. Tongue long, slender. Antenna long, in ♂ with fine, close ciliation. Legs very long, thin. Hindtibia with a small hair-pencil, and small terminal spurs (medians wanting). Abdomen very long and thin. Wing-expanse 30 mm. Wings thinly scaled, semitransparent. Forewing with apex strongly produced, falcate, cell one-half, SC^1 out of C (?), SC^2 stalked with SC^{3-5} from before apex of cell, radials normal, M^1 separate from R^3; hindwing with cell one-half. C touching SC at a point near base (1), SC^2 stalked with R^1, radials normal, M^1 separate from R^3, inner margin with a *long-fringed lappet* from base to one-third, narrow, widening distally (Bastelberger).

Early stages unknown.

Unknown to us in nature, but apparently distinguishable from *Zanclopteryx* by the longer palpus, the lappet on hindwing of ♂ and perhaps by freedom of SC^2 from SC^1.

Type of the genus : *Zanclorhacos nigrivenata,* Bastelberger.

Geographical distribution of species. — Brazil.

1. *Z. nigrivenata,* Bastelberger. Brazil.
Zanclorhacos nigrivenata, Bastelberer, Intern. Ent. Zeit. Guben, Vol. 2, p. 267 (1909).

72. Genus RACASTA, Walker

Racasta. Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 830 (1861).
Leucoreas. Warren, Novit. Zool. Vol. 11, p. 12 (1904) (nov. syn.).

Characters. — Face smooth-scaled. Palpus rather short, upcurved, second joint slightly rough-scaled, third joint short, obtuse. Tongue well developed. Antenna moderate, in both sexes shortly ciliated and with paired bristles. Thorax somewhat hairy beneath. Legs rather long. Femora nearly glabrous. Hindtibia dilated in ♂, with hair-pencil, all spurs present in both sexes. Tarsi moderately spinulose. Wing-expanse 31-52 mm. Wings ample, thickly but smoothly scaled. Frenulum present. Forewing with costa little arched, apex acute but not appreciably produced, cell one-half, SC^1 anastomosing strongly with C, SC^{2-5} stalked from before apex of cell, SC^2 anastomosing first with SC^1 and then with SC^{3-4}, radials normal, M^1 separate from R^3; hindwing with distal margin faintly waved, anal angle pronounced, cell scarcely one-half, C closely approximated to SC at a point near base, thence rapidly diverging, SC^2 from just before apex of cell, R^2 from slightly nearer to R^3 than to R^1, M^1 separate from R^3.

Early stages unknown.

This genus and the six following seem to be rather closely related, and would perhaps be treated by some systematists as sections of a single genus. But they have not hitherto been closely studied.

Type of the genus : *Racasta caberaria* Walker (1861).

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(1) Bastelberger says « connected by a short bar », but we assume that denudation and microscope would reveal the swelling and contact (without fusion) characteristic of *Derambila*, *Zanclopteryx*, etc.

Geographical distribution of species. — Neotropical.

1. *R. caberaria*, Walker. — Central America to Brazil.
   Racasta caberaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 830 (1861).
   Racasta spatiaria, Warren, Novit. Zool. Vol. 1, p. 374 (1894) (nec Guenée?).
   ? *Syllerias spatiaria* Mabilde, Guia Practica Princip. Collec. Insectos, p. 226, t. 24, f. 1 (1896).
2. *R. extendata* (Dognin) (præc. var.?; an ab.?). — **Pl. 1, Fig. 4.** — Ecuador, Peru.
   Syllexis extendata, Dognin, Le Naturaliste, Vol. 14, p. 144 (1892).
   Racasta caberaria (part.), Warren, Novit. Zool. Vol. 12, p. 310 (1905).
3. *R. spatiaria* (Guenée) (sp. dubia — ead. ac *caberaria?*). — Brazil.
   Syllexis spatiaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 50 (1858).
   Racasta spatiaria, Warren, Novit. Zool. Vol. 12, p. 310 (1905).
4. *R. rhodosticta* (Warren). — Peru, Bolivia.
   Leucoreas rhodosticta, Warren, Novit. Zool. Vol. 11, p. 13 (1904).

73. Genus DOLEROPHYLE, Warren

Dolerophyle. Warren, Novit. Zool. Vol. 1, p. 371 (1894).

Characters. — Face with appressed scales. Palpus moderate, second joint rough-scaled, third joint moderate, distinct, smooth. Tongue present. Antenna moderately long, in ♂ finely bipectinate to two-thirds, each pectination ending in a forward-curved bristle, replaced by the bristles after two-thirds. Thorax hairy beneath. Legs long and slender. Femora nearly glabrous. Hindtibia with all spurs. Wing-expanse 38-45 mm. Frenulum present. Forewing with costa strongly arched, apex acute and slightly produced, cell broad, nearly one-half, SC^1 anastomosing strongly with C, base of SC^2 obsolete or practically so, leaving it to arise out of SC^1 and anastomose with stalk of SC^{3-4} (1), SC^{3-5} stalked from before apex of cell, radials normal, M^1 separate from R^3; hindwing with inner margin rather long, anal angle pronounced, cell somewhat less than one-half the length of wing, C as in the allied genera, SC^2 just before apex of cell, radials normal, M^1 just before R^3.

Early stages unknown.

Type of the genus : *Dolerophyle nerisaria* (Walker) = *Oxydia* (?) *nerisaria*, Walker (1894).

Geographical distribution of species. — Amazons.

1. *D. nerisaria* (Walker) — Amazons.
   Oxydia (?) *nerisaria*, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 223 (1860).
   Gynopteryx (?) *tendinaria*, Felder, Reise Novara, Lep. Het. t. 123, f. 24 (1875).
   Dolerophyle nerisaria, Warren, Novit. Zool. Vol. 1, p 371 (1894).

74. Genus DOLICHONEURA, Warren

Dolichoneura. Warren, Novit. Zool. Vol. 1, p. 371 (1894).

Characters. — Face with appressed scales. Palpus moderate or rather short, rather slender, upcurved. Tongue present. Antenna rather long, ciliated in ♂ and very shortly in ♀. Thorax hairy beneath. Femora somewhat hairy. Hindtibia in ♂ dilated, with hair pencil, in both sexes with all spurs

(1) In most of the genera forming Group II of the *Œnochromicae* the base of SC^2 (out of stalk of SC^{3-5}) is weak or slender and tends to become obsolete in individual species or even individual specimens; compare *Noreia*, *Alex*, etc.).

present. Tarsi spinulose. Wing-expanse 34-44 mm. Frenulum present. Forewing with apex acute or (in ♀) slightly falcate, cell usually short, SC^1 anastomosing strongly with C, SC^{2-5} stalked from just before apex of cell, SC^2 anastomosing first with SC^1 and then with SC^{3-4}, radials normal, M^1 from just before R^3; hindwing with cell very short (in *nigrinotata* only moderately short — about two-fifths of length of wing), SC^2 separate from R^1, R^2 slightly above middle of discocellulars, M^1 just before R^3 (**Pl. 2, Fig. 9**). ♂ genitalia (*convergens*) with uncus (?) widely spatulate, angled; harpe with longitudinal ridge, swollen and rounded towards the centre and here covered with hairs; penis as long as genitalia, vesica with one cornulus, an obtuse thorn and bluntly tapered below.

Early stages unknown.

Type of the genus : *Dolichoneura albidentata*, Warren (1894).

Geographical distribution of species. — Tropical South America.

1. *D. albidentata*, Warren. Guianas.
   Dolichoneura albidentata, Warren, Novit. Zool. Vol. 1, p. 372 (1894).
2. *D. innotata*, Warren. Guianas.
   Dolichoneura innotata, Warren, Novit. Zool. Vol. 1, p. 372 (1894).
3. *D. convergens*, Warren. Peru.
   Pycnoneura convergens, Warren, Novit. Zool. Vol. 11, p. 498 (1904).
4. *D. nigrinotata*, Warren (huj. gen. ?). Guianas.
   Dolichoneura nigrinotata, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 407 (1906).

75. Genus PYCNONEURA, Warren

Pycnoneura. Warren, Novit. Zool. Vol. 1, p. 373 (1894).
Achlora, sect. I. Guenée, Spec. Gén. Lép. Vol. 9, p. 335 (1858) (nec sect. typ.).
Chrysotænia. Felder, Reise Novara, Lep. Het. t. 133, f. 7 (1875) (indescr.) (nov. syn.).

Characters. — Face smooth. Palpus rather short, upcurved, third joint distinct. Tongue developed. Antenna rather long, in ♂ ciliated, in ♀ almost simple. Thorax hairy beneath. Legs rather long. Femora somewhat hairy. Hindtibia with four nearly equal spurs, in ♂ with hair-pencil. Wing-expanse 30-46 mm. Frenulum present. Forewing with apex slightly produced, in ♂ not acute, in ♀ sometimes subfalcate, distal margin slightly concave, cell nearly one-half, discocellulars nearly vertical, slightly inangled, subcostal venation variable, SC^1 from just before stalk of SC^{2-5}, or (*cinerea*) very shortly stalked with them, anastomosing with C and afterwards with SC^2 (or in *ablataria* sometimes giving rise to SC^2), SC^2 usually stalked with SC^{3-5} (long-stalked in *cinerea*, shorter-stalked in the other species), its base sometimes absent in *ablataria*, anastomosing, after SC^1, with SC^{3-4} (except in *cinerea*), R^1 normal, R^2 from middle or from slightly above middle of discocellulars, M^1 well separated from R^3; hindwing with cell very short, venation distorted in ♂ and the veins thickened below with scales, SC^2 rather remote from R^1, R^2 from above middle of discocellulars, sometimes from close to R^1, M^1 and M^2 curved near their origin, ♀ venation more normal, but still with cell very short and SC^2 rather remote from R^1.

Early stages unknown.

Type of the genus : *Pycnoneura oxypteraria* (Guenée) = *Achlora oxypteraria*, Guenée (1894).

Geographical distribution of species. — Tropical South America.

1. *P. oxypteraria* (Guenée). French Guiana.
   Achlora oxypteraria, Guenée, Spec. Gén. Lép. Vol. 9, p. 335 (1858).
   Pycnoneura oxypteraria, Warren, Novit. Zool. Vol. 1, p. 374 (1894).

2. *P. cinerea* (Butler) (præc. var.?). Amazons to British Guiana.
Menda cinerea, Butler, Trans. Ent. Soc. Lond. p. 346 (1881).
3. *P. ablataria* (Guenée). Amazons.
Achlora ablataria, Guenée, Spec. Gén. Lép. Vol. 9, p. 336 (1858).
Acidalia quadripunctata, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 789 (1861) (nov. syn.).
Chrysotaenia ardeata, Felder, Reise Novara, Lep Het. t. 133, f. 7 (1875) (nov. syn.).
Pycnoneura ablataria, Warren, Novit. Zool. Vol. 1, p. 374 (1894).
4. *P. turpis*, Warren (huj. gen.?). Bolivia.
Pycnoneura turpis, Warren, Novit. Zool. Vol. 11, p. 13 (1904).
5. *P. rectilineata*, Warren (huj. gen.?). French Guiana.
Pycnoneura rectilineata, Warren, Proc. U. S. Nat. Mus. Vol. 30, p. 408 (1896).

76. Genus ENTOGONIA, Warren

Entogonia. Warren, Novit. Zool. Vol 11, p. 12 (1904)

Characters. — Face rather narrow, with appressed scales. Palpus moderate, second joint rather stout, rough-scaled, third joint small, blunt. Antenna (♂) evenly ciliated, the ciliations hardly longer than the width of shaft. Thorax slightly hairy beneath. Femora glabrous. Hindtibia dilated, with strong pencil-tuft, median spurs well developed, the inner the longer. Wing-expanse 30 mm. Wings smoothly scaled. Frenulum present. Forewing triangular, costa nearly straight, cell one-half, SC^1 out of C, anastomosing with stalk of SC^{2-4}, SC^{2-5} stalked from about three-fourths of cell, radials normal, M^1 separate from R^3; hindwing with SC^2 separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Differs from the surrounding genera in the complete obsolescence of the base of SC^1, leaving this vein to arise out of C

Type of the genus : *Entogonia schistacea*, Warren (1904).

Geographical distribution of species. — Bolivia.

1. *E. schistacea*, Warren. Bolivia.
Entogonia schistacea, Warren, Novit. Zool. Vol. 11, p. 12 (1904).

77. Genus LEPTOCTENOPSIS, Warren

Leptoctenopsis. Warren, Novit. Zool. Vol. 2, p. 84 (1895); Vol. 12, p. 310 (1905).
Leptoctenista. Warren, ibidem, Vol. 1, p. 372 (1894) (nec Warren, 1891).
Parachorentes. Warren, ibidem, Vol. 4, p. 416 (1897).

Characters. — Face smooth-scaled. Palpus moderate, second joint rough-scaled, third joint slender, smoother-scaled. Tongue well developed. Antenna moderate, in ♂ shortly bipectinate, the pectinations very slender and terminating in very fine curved bristles, two pairs of pectinations to each segment, the distal the longer (*calexaria*), or merely ciliated, in ♀ with short cilia and paired bristles. Thorax slightly hairy beneath. Legs long and slender in the type-species. Femora glabrous. Hindtibia in ♂ with hair-pencil, in both sexes with all spurs, not conspicuously unequal in length. Tarsi with a few scattered spinules. Wing-expanse 22-44 mm. Frenulum present Forewing with apex acute, usually produced or minutely falcate, distal margin (except below apex) gently convex, cell one-half, SC^1 out of cell or (in *subrufa*) from base of stalk of SC^{2-5}, anastomosing strongly with C, SC^2 anastomosing with (or

arising out of, compare footnote to *Dolerophyle*) SC^1, later anastomosing with SC^{3-4}, SC^{3-5} stalked (and, normally, with SC^2 also) from just before apex of cell, radials normal, M^1 separate from R^3; hindwing with cell about (or almost) one-half, distal margin little convex, C sometimes touching SC at a point near base (but without fusion), usually there approximated, rarely (*subrufa*) somewhat remote, SC^2 from just before just before apex of cell, radials normal, M^1 from just before lower angle of cell (**Pl. 2, Fig. 10**).

Early stages unknown.

Differs from *Achlora* — apart from the secondary sexual characters — in the shape of the wings, the usually longer cell of hindwing, the shorter palpus, etc., but is a somewhat mixed genus, having hitherto been made a refuge for those Neotropical species of the present group which are neither true *Achlora* nor very short-celled. Section II has not yet been sharply differentiated from *Noreia*, except geographically.

Type of the genus : *Leptoctenopsis calexaria* (Walker) = *Gynopteryx calexaria*, Walker (1895 [1894]).

Geographical distribution of species. — Neotropical.

SECTION I. — ♂ antenna shortly bipectinate (*Leptoctenopsis*, Warren).

1. *L. calexaria* (Walker). — Amazons.
   Gynopteryx (?) *calexaria*, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 98 (1860).
   Cratoptera retectaria, Felder, Reise Novara, Lep. Het. t. 133, f. 17 (1875) (nov. syn.).
   Cratoptera calexaria, Butler, Trans. Ent. Soc. Lond. p. 321 (1881).
   Leptoctenista calexaria, Warren, Novit. Zool. Vol. 1, p. 372 (1894).

SECTION II. — ♂ antenna ciliated; venation normal (*Parachoreutes*, Warren).

2. *L. icaunaria* (Walker). — Brazil.
   Gynopteryx (?) *icaunaria*, Walker, List Lep. Ins. Brit. Mus. Vol. 20, p. 99 (1860).
   Cratoptera icaunaria, Butler, Trans. Ent. Soc. Lond. p. 321 (1881).
3. *L. subpurpurea* (Warren). — British Guiana, Trinidad.
   Parachoreutes subpurpurea, Warren, Novit. Zool. Vol. 4, p. 417 (1897).
   Leptoctenopsis subpurpurea, Warren, ibidem, Vol. 12, p. 310 (1905)
4. *L. murina*, Warren. — Venezuela, Peru.
   Leptoctenopsis murina, Warren, Novit Zool. Vol. 8. p. 437 (1901).
5. *L. leucographa*, Dognin. — Peru.
   Leptoctenopsis leucographa, Dognin, Ann. Soc. Ent. Belg. Vol. 50, p. 106 (1906).
6. **L. melusina, nov. sp.** (1), Prout. — Paraguay to S. E. Brazil.
7. **L. olivacea, nov. sp.** (2). Prout. (huj. sect ?) — ? N. Brazil.

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(1) **Leptoctenopsis melusina, nov. sp.** — ♂. 23-26 mm. Face crimson on the sides, fuscous between, somewhat furrowed in centre. Palpus brownish fuscous with a few crimson scales on side. Antenna light brown, with fascicles of moderate cilia (as long as diameter of shaft) and longer strong paired bristles. Forewing with costa straight nearly to apex distal margin slightly sinuate below apex. Wings above uniformly pale chocolate with glaucous reflections (colour of *Noreia perdensata*, etc.), sparsely dusted with fuscous, and traversed by a single fuscous line from 2 mm. before apex of forewing, parallel with termen to below SC^5, thence oblique to middle of inner margin and continued across hindwing to before one-half of inner margin, narrowly edged with light ferruginous; forewing with cell-spot minute, indistinct, and usually with two blackish terminal dots, one between SC^4 and SC^5, one between SC^5 and R^1. Underside almost unmarked, in forewing tinged with reddish, distinctly redder along costa and on subcostal veins. Sapucay (Paraguay) and Castro (Parana, S. E. Brazil). Type (Sapucay, Nov. 1904, W. Foster) in coll. L. B. Prout.

(2) **Leptoctenopsis olivacea, nov. sp.** — ♀. About size of *calexaria*. Costa of forewing very strongly arched, apex falcate. Venation normal, the subcostals rather well divergent, on account of expansion of costal area, cell rather broad, not shortened. Ground-colour olivaceous, glossy, the markings delicate, almost shadowy; cell-spot dark grey, rather large; a postmedial line from near apex of forewing to middle of inner margin and across middle of hindwing, brown, olive-tinged, shaded on either side by a whitish line, most conspicuous on veins; distally to the outer of these lines are some grey wedge-spots; antemedial line (on forewing only) similarly coloured to postmedial, but extremely faint; distal margin delicately shaded in pale violet-grey. « Espiritu Santo » (N. Brazil?). Type in Oxford Museum. The above imperfect description is from notes made on a hurried examination, and will be supplemented on occasion elsewhere, but will serve for the establishment of the species. It may possibly be a form of *leucographa*, with which it agrees in extremely falcate forewing, and which we only know from Dognin's description.

8. *L. mena* (Druce) (huj. sect. ?). Panama.
Cratoptera mena, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 35, t. 64, f. 11 (1892).

SECTION III. — ♂ antenna (?); SC^1 of forewing stalked with SC^{3-5}; C of hindwing rather remote from SC.

9. *L. subrufa* (Warren) (huj. gen. ?). Ecuador.
Leptoctenista subrufa, Warren, Novit. Zool. Vol. 7, p. 124 (1900).

78. GENUS ACHLORA, GUENÉE

Achlora. Guenée, Spec. Gén. Lép. Vol. 9, p. 335 (1858); Warren, Novit. Zool. Vol. 1, p. 371 (1894).
Ophiogramma Hübner, Zutr. Exot. Schmett. Vol. 3, p. 37 (1825) (indescr.).
Euctenachlora. Warren, Novit. Zool. Vol. 1. p. 372 (1894).

Characters. — Face smooth-scaled. Palpus rather long and strong, second joint rough-scaled, third joint rather slender, much longer in ♀ than in ♂. Tongue developed. Antenna rather long and slender, bipectinate to apex in ♂, the pectinations well ciliated and each terminating in a curved bristle, in ♀ minutely ciliated and with paired bristles. Thorax hairy beneath. Legs rather long and slender. Femora nearly glabrous. Hindtibia in ♂ dilated, with hair-pencil, in both sexes with all spurs present, the inner median the longest, terminals rather short. Tarsi with a few scattered spinules. Wing-expanse 28-34 mm. Wings thickly scaled; hindwing in ♂ often with the underside tufted with hairs on and in the vicinity of M^2. Frenulum developed. Forewing with apex not produced in ♂, acute in ♀, cell about one-half, SC^1 anastomosing strongly with C, SC^2 anastomosing with (or exceptionally arising out of, compare footnote to *Dolerophyle*) SC^1, SC^{3-5} stalked (and, normally, with SC^2 also) from just before apex of cell, radials normal, M^1 from close to R^3; hindwing with inner and distal margins rather long, distal margin convex, at least from R^2 to anal angle, cell rather short (about two-fifths), SC^2 from just before apex of cell, R^2 from slightly above middle of discocellulars, R^3 and M^1 stalked, connate or separate.

Early stages unknown.

Type of the genus : *Achlora cuprinaria*, Guenée (1894).

Geographical distribution of species. — Neotropical.

SECTION I. — Hindwing with R^3 and M^1 connate or stalked; ♂ with antennal pectinations moderate, and with hair-tufts on hindwing below; ♀ palpus very long (*Achlora*, Guenée, Warren, restr.).

1. *A. cuprinaria*, Guenée. Guianas, Venezuela, ? Panama.
Achlora cuprearia, Guenée, Spec. Gén. Lép. Vol. 9, p. 336, t. 9, f. 4 (1858).
Achlora cuprinaria, Guenée, ibidem, errata (1858).
2. *A. perigearia*, Guenée (præc. var. ?). Brazil.
Achlora perigearia, Guenée, Spec. Gén. Lép. Vol. 9, p. 336, t. 9, f. 4 (1858).

SECTION II. — Hindwing with R^3 and M^1 usually separate, rarely connate; ♂ with antennal pectinations long, and without hair-tufts on hindwing below; ♀ palpus less long than in Section I (always ?) (*Euctenachlora*, Warren) [*Ophiogramma*, Hübner, indescr.].

3. *A. injunctaria* (Hübner). Brazil.
Ophiogramma injunctaria, Hübner, Zutr. Exot. Schmett. Vol. 3, p. 37, f. 573, 574 (1825).
Terpna (?) *injunctaria*, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol 1, p. 37 (1856).
Achlora injunctaria, Guenée, Spec. Gén. Lép. Vol 9. p. 337 (1858).

4. *A. coenobiata*, Felder. Colombia.
Achlora coenobiata, Felder, Reise Novara, Lep. Het. t. 127, f. 34 (1875).
Euctenachlora caenobiata, Warren, Novit. Zool. Vol. 1, p. 372 (1894).
5. **A. zoë, nov. sp.** (1), Prout. British Guiana.

79. Genus NOREIA, Walker

Noreia. Walker, List Lep. Ins. Brit Mus. Vol. 24, p. 1092 (1862).
Panulia. Warren, Novit. Zool. Vol. 1, p. 372 (1894) (nov. syn.).

Characters. — Face scarcely protuberant, with appressed scales. Palpus moderate, upcurved, second joint with moderately appressed scales (stouter and rougher-scaled in *papuensis* and *achloraria*), third joint small, not distinct. Tongue present. Antenna moderate, shortly ciliated in ♂, pubescent in ♀. Thorax slightly hairy beneath. Femora nearly glabrous. Hindtibia with all spurs present, in ♂ dilated, with a pencil of hairs. Tarsi moderately spinulose. Abdomen sometimes tufted ventrally and laterally. Wing-expanse 29-41 mm. Wings thickly but smoothly scaled, hindwing of ♂ often tufted with hairs at and in the vicinity of M^2. Frenulum present. Forewing with costa slightly arched, apex pronounced but not falcate, distal margin little convex, cell usually rather short, SC^1 anastomosing with C, SC^2 usually from stalk of SC^{3-5} and anastomosing with SC^1 (its base occasionally wanting, see footnote to *Dolerophyle*), always anastomosing with SC^{3-4}, SC^{3-5} stalked from before apex of cell, radials normal, M^1 separate from R^3; hindwing with distal margin slightly convex, angles pronounced, cell less than one-half, C and SC each slightly swollen at point of approach near base, but without contact, SC^2 separate from R^1, radials normal; M^1 separate from R^3.

Early stages unknown.

This genus, like the preceding, often develops secondary sexual characters in the direction of ♂ hair-tufts, no doubt scent-organs. But these seem very liable to abrasion, and in any case can hardly be made a basis for generic subdivision, except in the case of *achloraria*. In the type-species, *perdensata*, they are wanting (2), while in its closest ally, *ajaia*, they are well developed on the underside of the hindwing; in *papuensis*, *dentilineata*, etc., the tufts are also developed, in *punctilinea*, the typical form of *unilineata*, etc., wanting. The genus may be regarded as the Old World representative of *Achlora*, and might almost be treated as subgeneric thereto, differing chiefly in the ♂ antenna.

Type of the genus : *Noreia perdensata*, Walker (1862).

Geographical distribution of species. — India to New Guinea.

Section I. — Abdomen without strong hair-tufts laterally; hindwing with distal margin regular, and without strong hair-tuft on inner margin (*Noreia*, Walker, sect. typ.).

1. *N. perdensata*, Walker. India, Ceylon, ? Celebes.
Noreia perdensata, Walker, List Lep. Ins. Brit. Mus. Vol. 24, p. 1092 (1862).
Decetia perdensata, Walker, ibidem, Vol. 35, p. 1557 (1866).
Noreia ajaia (part.), Cotes & Swinhoe, Cat. Moths India (4), p. 488 (1888) (nec Walker).

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(1) **Achlora zoë, nov. sp.** — ♂, 28-33 mm. Indistinguishable from *cuprinaria*, Guenée, except in the *long* antennal pectinations and the absence of hair-tufts on the undersurface of the ♂ hindwing, both of which distinctions necessitate its being placed in Section II. It thus bears the same relation to *injunctaria* as does *cuprinaria* to *perigearia* — that of a probable geographical race. On the other hand, its wonderfully close agreement with *cuprinaria*, which also occurs in the same locality, would tempt to the belief that it is a structurally modified variation of that species. Potaro River, British Guiana (C. B. Roberts). Type and two co-types, all ♂, in coll. Br. Mus.

(2) We have seen a form, or subspecies, from Travancore with them distinctly present, and with other slight differences from typical *perdensata*, but have not yet been able to give it full investigation.

2. *N. ajaia* (Walker). — Burma to Malaysia.
Timandra ajaia, Walker, Journ. Proc. Linn. Soc. Lond. Zool. Vol. 3, p. 195 (1859).
? *Decetia unilineata* (part.), Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1557 (1866) (nec pars typ.).
Noreia ajaia (part.), Cotes & Swinhoe, Cat. Moths India (4), p. 488 (1888).
? *Noreia perdensata* (part.), Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 326 (1900) (nec Walker).

3. *N. unilineata* (Walker). — Sumatra, Singapore, ? New Guinea.
Decetia unilineata (part.), Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1557 (1866).
Decetia moestata, Walker, ibidem, p. 1558 (1866).
Noreia unilineata, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 326 (1900).

4. *N. albifimbria*, Warren. — Celebes.
Noreia albifimbria, Warren, Novit. Zool. Vol. 4, p. 206 (1897).

5. *N. venusta*, Warren. — Borneo.
Noreia venusta, Warren, Novit. Zool. Vol. 6, p. 12 (1899).

6. *N. vinacea*, Warren. — Dutch New Guinea.
Noreia vinacea, Warren, Novit. Zool. Vol. 6, p. 13 (1899).

7. *N. punctilinea* (Warren) (huj. gen. ?). — Sumba.
Physetostege (?) *punctilinea*, Warren, Novit. Zool. Vol. 6, p. 13 (1899).

8. *N. dentilineata*, Warren. — Cagayan-Sulu.
Noreia dentilineata, Warren, Novit. Zool. Vol. 12, p. 419 (1905).

9. *N. pulverosa*, Warren. — British New Guinea.
Noreia pulverosa, Warren, Novit. Zool. Vol. 13, p. 76 (1906).

10. *N. papuensis*, Warren (1). — Dutch New Guinea.
Noreia papuensis, Warren, Novit Zool. Vol. 4, p. 387 (1897).

SECTION II. — Abdomen of ♂ with strong hair-tufts laterally; hindwing of ♂ with distal margin slightly incurved in middle, and with large tuft of curled hair on inner margin (*Panulia*, Warren).

11. *N. achloraria* (Warren). — Malaysia.
Panulia achloraria, Warren, Novit. Zool. Vol. 1, p. 373 (1894).

80. GENUS CALLIPOTNIA (PRÆC. SUBGEN.?), WARREN

Callipotnia. Warren, Novit. Zool. Vol. 6, p. 323 (1899).

Characters. — Face not protuberant, with moderately appressed scales. Palpus rather long and strong, upcurved, second joint somewhat rough-scaled, third joint blunt. Tongue developed. Antenna in ♂ (♀ unknown) with rather long curved ciliations. Hindtibia in ♂ dilated, with hair-pencil, all spurs present, the inner median long. Wing-expanse 36 mm. Wings ample, well scaled. Frenulum present. Forewing with costa rather straight except near apex, apex prominent, ♂ with a fovea, which is concealed above by hairs, SC^1 anastomosing rather strongly with C, SC^2 anastomosing rather strongly with SC^1, later anastomosing with the stalk of SC^{3-4}, SC^{3-5} stalked, radials normal, M^1 separate from R^3; hindwing with distal margin rounded, medians beneath tufted with hair, cell rather short, C approximated to SC shortly near base, SC^2 separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

(1) This species marks a transition to Group II, the abdomen being tufted beneath, and the inner margin of hindwing having a very noticeable tuft of hairs, though not nearly so developed as in *achloraria*.

We have followed Warren in recognizing this little-known genus as distinct; but those systematists who entirely refuse validity to genera founded on secondary sexual characters would probably have to sink it to *Noreia*. The specialized fovea is the most noteworthy feature.

Type of the genus : *Callipotnia multicolor*, Warren (1899).

Geographical distribution of species. — New Guinea.

1. *C. multicolor*, Warren. Dutch New Guinea.
   Callipotnia multicolor, Warren, Novit. Zool. Vol. 6, p. 323 (1899).

81. Genus PHYSETOSTEGE, Warren

Physetostege. Warren, Novit. Zool. Vol. 3, p. 99 (1896).

Characters. — Face not protuberant, with appressed scales. Palpus moderate, rostriform, second joint rather rough-scaled. Tongue developed. Antenna rather slender, in ♂ bipectinate with very fine pectinations, decreasing to apex. Legs slender. Hindtibia with all spurs present, unequal. Wing-expanse 28-36 mm. Frenulum present. Forewing of ♂ with a strong fovea, which is covered above by a wave of curved hair-like scales, SC^1 anastomosing at a point with C, SC^2 out of stalk of SC^{3-5}, anastomosing rather strongly with SC^{-}, then again with SC^{3-4} immediately ofter leaving SC^1, radials normal, M^1 separate from R^3; hindwing with C rather remote from SC except at a point near base where it (the costal) is markedly swollen, SC^2 separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Another offshoot of the preceding genera.

Type of the genus : *Physetostege miranda*, Warren (1896).

Geographical distribution of species. — New Guinea to West Australia.

1. *P. miranda*, Warren.
   a. *Physetostege miranda miranda.* New Guinea.
      Physetostege miranda, Warren, Novit. Zool. Vol. 3, p. 99 (1896).
   b. *Physetostege miranda rufata.* N. Queensland to W. Australia.
      Physetostege miranda rufata, Warren, Novit. Zool. Vol. 3, p. 355 (1896).

82. Genus ALEX, Walker

Alex. Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1753 (1862).
Orgalima. Walker, ibidem, Vol. 35, p. 1616 (1866).
Gamoruna. Moore, Lep. Coll. Atkinson, p. 265 (1888).

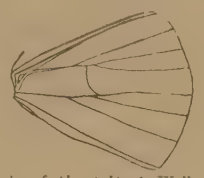
Characters. — Face somewhat protuberant below, with moderately appressed scales above, but terminating in a strong sharp cone of scales below. Palpus rather long, especially in the ♀, second joint rough-scaled, third joint bluntly pointed, very long in ♀, cylindrical, smooth (**Fig. 9**). Tongue present. Antenna rather long, slender, in ♂ with short slender pectinations (long in *longipecten*), each surmounted with a curved bristle, apex of shaft with the bristles only, in ♀ shortly ciliated and with paired bristles. Thorax hairy beneath. Legs slender. Femora somewhat hairy. Foretibia short (length of first tarsal joint), hindtibia in both sexes with all spurs, the inner median long, in ♂ with hair-pencil. Tarsi spinulose. Wing-expanse 40-48 mm. Frenulum present. Forewing with costa arched, apex acute,

Fig. 9

Head of *Alex palparia*, Walker, ♀.

cell rather less than one-half, SC^1 anastomosing with C, SC^2 usually arising out of stalk of SC^{3-5} and anastomosing with SC^1 (Hampson, *Fauna Ind. Moths,* Vol. 3, p. 322, 323, describes and figures it with its base obsolete, compare footnote to *Dolerophyle*, supra), stalk of SC^{3-5} from just before apex of cell, radials normal, M^1 from just before R^3; hindwing with distal margin rounded, angles well pronounced, cell short, C well removed from SC, briefly approximated only at the strong upward bend of latter near base, SC^2 from just before R^1, R^2 in ♂ connate or short-stalked with R^1; in ♀ from slightly (in *longipecten* considerably) above middle of discocellulars, M^1 from just before R^3 (**Fig. 10**). ♂ genitalia (*palparia*) with uncus enormously developed, soft, but covered by two rows of compound bunches or fans of dark, spreading, flattened spines; harpe narrow, margin rather thickened, hairy, no armature; « juxta » curved, heavily scobinated; penis long, almost parallel, soft.

FIG. 10



Hindwing of *Alex palparia*, Walker. ♂

Early stages unknown.

The curious anomaly in the position of R^2 of hindwing in the ♂ is the outstanding feature of this genus, while the antenna in this sex farther distinguishes it from *Geoglada*. The ♀♀ of the two genera, unfortunately, have as yet scarcely been differentiated structurally, though the palpus is more extremely long in *Alex*, its third joint generally more slender and smoother-scaled, and R^2 of hindwing rather nearer to R^1 than in *Geoglada;* in both sexes the subcostal venation of forewing that seems commoner in *Alex* (see supra) seems rarer in *Geoglada*, where that given in Hampson's figure of *Alex* oftener prevails.

Type of the genus : *Alex palparia* (Walker) = *Panagra palparia*, Walker = *Alex nigrozonata*, Walker (1862).

Geographical distribution of species. — India to Solomons.

1. *A. palparia* (Walker). — India to Borneo.
   Panagra palparia, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 988 (1861).
   Alex nigrozonata, Walker, ibidem, Vol. 26, p. 1754 (1862).
   Gamoruna palparia, Moore, Lep. Coll. Atk. p. 265 (1888).
   Alex palparia, Swinhoe, Trans. Ent. Soc. Lond. p. 184 (1894).
   Alex indica, Warren, Novit. Zool. Vol. 1, p. 368 (1894).
   Alex indica, ab. *obsoleta*, Warren, ibidem, p. 368 (1894) (ab.).
2. *A. continuaria* (Walker). — Moluccas, New Guinea.
   Orgalima continuaria, Walker, List Lep Ins. Brit. Mus. Vol. 35, p. 1617 (1866).
   Alex continuaria, Swinhoe, Lep. Het. Oxf. Mus. Vol. 2, p. 326 (1900).
3. *A. aurantiata*, Warren. — Great Oby.
   Alex aurantiata, Warren, Novit. Zool. Vol. 11, p. 484 (1904).
4. *A. longipecten*, Warren. — Solomons.
   Alex longipecten, Warren, Novit. Zool. Vol. 12, p. 417 (1905).

83. GENUS GEOGLADA, SWINHOE

Geoglada. Swinhoe, Trans. Ent. Soc. Lond. p. 184 (1894).
Gamoruna. Warren, Novit. Zool. Vol. 1, p. 367 (1894) (nec Moore).
Conolophia. Warren, ibidem, p. 369 (1894) (nov. syn.).
Alex, sect. 2. Hampson, Fauna Ind. Moths, Vol. 3, p. 323 (1895) (ex Walker, nec sect. typ.).
Hypophracta. Warren, Novit. Zool. Vol. 12. p. 382 (1905) (nov. syn.).

Characters. — Face terminating in a strong cone of scales. Palpus rather long, rostriform, second joint with long rough scaling, third joint strong, rather rough-scaled. Tongue present. Antenna

rather long, slender, in ♂ ciliated, in ♀ shortly ciliated and with paired bristles. Thorax hairy beneath. Femora somewhat hairy. Hindtibia with all spurs. Tarsi spinulose. Wing-expanse 39-52 mm. Frenulum present. Forewing with costa somewhat arched, apex acute, cell rather less than one-half, SC^1 anastomosing with C, SC^2 usually out of SC^1 beyond the anastomosis, occasionally (at least in *helicola*) arising out of stalk of SC^{3-5} and anastomosing with SC^1, stalk of SC^{3-5} from just before apex of cell, radials normal, M^1 from just before R^3; hindwing with distal margin rounded, apex on the whole more rounded than in *Alex*, cell short, C shortly approximated to SC near base, SC^2 from just before R^1, R^2 normal in both sexes (or from scarcely appreciably nearer to R^1 than to R^3), M^1 from just before R^3.

Early stages unknown.

It is not impossible to treat this genus, as Hampson has done, as a subgenus of the preceding. See our remarks there.

Type of the genus : *Geoglada helicola*, Swinhoe (1894).

Geographical distribution of species. — India, Burma, Central and South Africa.

SECTION I. — ♂ without special modifications of abdomen or inner margin of hindwing (*Geoglada*, Swinhoe).

1. *G. helicola*, Swinhoe. — N. India.
   Geoglada helicola, Swinhoe, Trans. Ent. Soc. Lond. p. 184 (1894).
   Gamoruna palparia, Warren, Novit. Zool. Vol. 1, p. 368 (1894) (nec Walker).
2. *G. nigripuncta* (Hampson). — Burma, India with Ceylon.
   Gamoruna nigripuncta, Hampson, Ill. Het. Coll. Brit. Mus. Vol. 8, p. 114, t. 151, p. 18 (1891).
   Alex nigripuncta, Hampson, Fauna Ind. Moths, Vol. 3, p. 323 (1895).

SECTION II. — ♂ with cone of erect scales on middle of inner margin of hindwing (*Conolophia*, Warren).

3. *G. conscitaria* (Walker). — Central and South Africa.
   Panagra conscitaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 986 (1861).
   Panagra smilodontaria, Snellen, Tijdschr. v. Ent. Vol. 15, p. 83 (1872).
   ? *Gamoruna aemula*, Warren, Novit. Zool. Vol. 1, p. 368 (1894).
   Conolophia conscitaria, Warren, ibidem, p. 369 1894).
   Conolophia maculata, Bastelberger, Intern. Ent. Zeit. Guben, Vol. 2, p. 98 (1908) (ab.) (nov. syn.).
   Conolophia maculata, subsp. *rubrifusa*, Bastelberger, ibidem, p. 282 (1909) (ab.) (nov. syn.).
4. *G. püngeleri* (Bastelberger). — Madagascar.
   Conolophia püngeleri, Bastelberger, Jahrb. Nassau. Ver. Vol. 60, p. 77 (1907).

SECTION III. — ♂ with abdomen armed with hair-tufts on fifth, sixth and last two segments (*Hypophracta*, Warren).

5. *G. persimilis* (Warren). — British East Africa.
   Hypophracta persimilis, Warren, Novit. Zool. Vol. 12, p. 382 (1905).

84. GENUS BRACHYTRITA (PRÆC. SUBGEN. ?), SWINHOE

Brachytrita. Swinhoe, Trans. Ent. Soc. Lond. p. 576 (1904).

Characters. — Face somewhat protuberant below, with appressed scales. Palpus moderate, second joint rough-scaled, third joint short and blunt. Tongue developed. Antenna (broken in type) in ♂

ciliated, in ♀ filiform with minute paired bristles. Thorax slightly hairy beneath. Femora glabrous (?). Hindtibia with all spurs present, rather short except the inner median, a hair-pencil in ♂. Wing-expanse 35-40 mm. Wings shaped much as in *Alex*, hindwing more produced at anal angle. Frenulum developed. Forewing with cell rather short, SC^1 anastomosing with C^1, SC^2 out of stalk of SC^{3-5}, anastomosing first with SC^1 and then with stalk of SC^{4-5}, SC^{3-5} stalked from near apex of cell, radials normal, M^1 separate from R^3; hindwing with cell rather short, C somewhat approximated to SC near base, thence gradually diverging, SC^2 from just before R^1, R^2 scarcely above middle of discocellulars, M^1 separate from R^3.

Early stages unknown.

Type of the genus : *Brachytrita cervinaria*, Swinhoe (1904).

Geographical distribution of species. — East African.

1. *B. cervinaria*, Swinhoe. German East Africa.
   Brachytrita cervinaria, Swinhoe, Trans. Ent. Soc. Lond. p. 576 (1904).

85. Genus PANAGROPSIS, Warren

Panagropsis. Warren, Novit. Zool. Vol. 1, p. 370 (1894).

Characters. — Face with appressed scales. Palpus long, rostriform, second joint rough-scaled, third joint pointed. Tongue present. Antenna moderate, in ♂ bipectinate with well-developed pectinations each terminating in a very short bristle, in ♀ minutely ciliated. Thorax scarcely hairy beneath. Femora glabrous. Hindtibia not dilated, all spurs present. Wing-expanse 26-34 mm. Frenulum present. Forewing moderately broad, costa faintly arched, apex somewhat acute, cell about one-half the length of wing, SC^1 anastomosing with C, SC^2 out of stalk of SC^{3-5}, anastomosing first with SC^1 and then with stalk of SC^{3-4}, stalk of SC^{3-5} from before apex of cell, radials normal, M^1 separate from R^3; hindwing with cell about one-half, C approximated to the thickened upcurve of subcostal at a point near base (much as in *Noreia*). SC^2 separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Type of the genus : *Panagropsis equitaria* (Walker) = *Panagra equitaria*, Walker (1894).

Geographical distribution of species. — South African.

1. *P. equitaria* (Walker). South Africa.
   Panagra equitaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 986 (1861).
   Panagra suberrata, Walker, ibidem, p. 988 (1861).
   Panagra humerata, Walker, ibidem (1861).
   Panagra secretata, Walker, ibidem, Vol. 26, p. 1660 (1862).
   Panagropsis equitaria, Warren, Novit. Zool. Vol. 1, p. 370 (1894).
2. *P. muricolor* (Warren). Natal.
   Noreia muricolor, Warren, Novit. Zool. Vol. 4, p. 30 (1897).

86. Genus APATADELPHA, nov. gen., Prout

Apatadelpha, nov. gen. Prout.

Characters. — Face smooth above, with projecting cone of scales below. Palpus rather long, porrect, second joint rough-scaled, third joint distinct, conical. Tongue present. Antenna moderate, in ♂

bipectinate with fine, short, ciliated pectinations, each terminating in a single bristle, in ♀ with slight ciliation and short paired bristles. Thorax hairy beneath. Femora somewhat hairy. Hindtibia in ♂ slightly dilated, with hair-pencil, all spurs present in both sexes. Wing-expanse 37-42 mm. Frenulum present. Forewing with costa arched, apex acutely produced, distal margin little convex, cell about one-half, SC^{1-2} stalked, arising out of C, SC^2 closely approximated to SC^{3-4}, but without contact, SC^{3-5} stalked from before apex of cell, radials normal, M^1 separate from R^3; hindwing slightly elbowed at end of R^3, cell about one-half, C approximated to SC at a point near base, SC^2 separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Resembles the preceding genus in many of its characters, but differs in shape, frons, antennal structure, and in the subcostal venation of the forewing.

Type of the genus : *Apatadelpha biocellaria* (Walker) = *Panagra biocellaria*, Walker.

Geographical distribution of species. — W. Africa.

1. *A. biocellaria* (Walker). Sierra Leone to Nigeria.
Panagra biocellaria, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1666 (1862).

Group III

87. Genus ORTHOSTIXIS, Hübner

Orthostixis. Hübner, Verz. bek. Schmett. p. 304 (1826 ?); Herrich Schäffer, Syst. Bearb. Schmett. Eur. Vol. 3, p. 92 (1848).

Characters. — Face slightly protuberant (especially in *cribraria*), with appressed scales (*cribraria*) or more roughly and loosely scaled (*calcularia*). Palpus rather short, loosely scaled. Tongue developed. Antenna about one-half, in ♂ with the segments thickened, densely and evenly ciliated, more shortly ciliated in the ♀. Thorax moderately hairy beneath. Femora glabrous. Hindtibia not dilated, median spurs wanting. Tarsi not spinulose. Wing-expanse 28-42 mm. Wings ample, with smooth glossy scaling. Frenulum present. Forewing with margins more or less rounded, cell rather long, SC^1 out of C, SC^{2-3} stalked, from near base of SC^{4-5}, their stalk anastomosing first with SC^1 and then usually with SC^4 (1), SC^{4-5} stalked from well before end of cell, DC^1 therefore rather long, DC^{2-3} short and little oblique, radials normal, M^1 separate from R^3; hindwing with distal margin rounded, cell about one-half, C separate from SC throughout, but connected with it by a short bar near base in *cribraria*, SC^2 separate from R^1, radials normal, M^1 well separated from R^3 (2). ♂ genitalia (*cribraria*) with harpe covered with hair, uncus a swelled, cucumber-like organ covered closely with short spines, subscaphium wanting; penis shorter than genitalia, straight and single-pointed.

Early stages described by Rebel, *Ann. Nat. Hofmus. Wien*, Vol. 18, p. 260.

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(1) Herrich-Schäffer (*Syst. Bearb. Schmett. Eur.* Vol. 6, t. 10, f. 10) figures — if the figure is accurate — an example with SC^{2-3} quite free from SC^4 ; we have observed the same phase of aberration in *Naxa*.

(2) The venation of the type species is well figured by Handlirsch (*Fossil. Ins.* t. 6, f. 8) as *Orthostixis gribraria*.

Type of the genus : *Orthostixis cribraria*, Hübner (1848).

Geographical distribution of species. — S. E. Europe to Syria and Armenia.

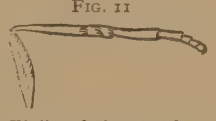
1. *O. cribraria*, Hübner. — S. E. Europe to Syria and Armenia.
   Geometra cribraria, Hübner, Samml. Eur Schmett. Geom. t. 16, f. 83 (1796).
   Phalaena laetata, Fabricius, Suppl. Ent. Syst. p. 456 (1798) (nec Fabricius, 1794).
   Zerene cribrata, Treitschke, Schmett. Eur. Vol. 5 (2), p. 445 (1825).
   Orthostixis cribraria, Hübner, Verz. bek. Schmett. p. 304 (1826 ?).
   Zerene cribraria, Boisduval, Gen. et Ind. Meth. Lep. Eur. p. 218 (1840).
   Orthostixis laetata, Guenée, Spec. Gén. Lép. Vol. 10, p. 220 (1858).
2. *O. calcularia*, Lederer. — Syria, Asia Minor.
   Orthostixis calcularia, Lederer, Verh. Zool.-bot. Ges. Wien, Vol. 3, p. 260 (1853).

88. Genus NAXA, Walker

Naxa, Walker, List Lep. Ins. Brit. Mus. Vol. 7, p. 1742 (1856),
Psilonaxa, Warren, Proc. Zool. Soc. Lond. p. 343 (1893).

Characters. — Face protuberant, smooth-scaled. Palpus minute, somewhat rough-scaled, appressed to face. Tongue present but weak. Antenna about two-fifths, bipectinate or serrate in both sexes. Thorax somewhat hairy beneath. Femora glabrous. Hindtibia not dilated, without spurs. Tarsi not spinulose (**Fig. 11**). Wing-expanse 35-47 mm. Wings ample, thinly scaled. Frenulum absent. Forewing with cell long, SC^1 arising out of C, SC^{2-3} stalked from cell, their stalk anastomosing strongly with SC^1, SC^3 (or even SC^{2-3}) usually later anastomosing shortly with SC^4, though exceptionally it may remain free, in any case separating from SC^4 further from apex than is normal in the *Geometridae*, SC^{4-5} stalked from before apex of cell, radials normal, M^1 well separated from R^3; hindwing with cell about one-half, C approximated to SC near base, in ♂ connected by a bar, in ♀ sometimes appressed for a short distance, SC^2 separate from R^1, radials normal, M^1 well separated from R^3 (**Pl. 2, Fig. 12**). ♂ genitalia (*textilis*) with harpe largely dilated, bearing on inner angle a bundle of long blunt spines, and on inner margin a lobe covered with numerous inward-pointing spines, uncus long and thin, apparently jointed to tegumen, « subscaphium » wanting.

Fig. 11



Hindleg of *Naxa textilis*, Walker, ♂.

Early stages unknown.

Type of the genus : *Naxa textilis*, Walker (1856).

Geographical distribution of species. — Asiatic.

Section I. — Antenna bipectinate in both sexes, the pectinations slightly shorter in ♀ (*Naxa*, Walker).

1. *N. textilis*, Walker. — India.
   Naxa textilis, Walker, List Lep. Ins. Brit. Mus. Vol. 7, p. 1743 (1856).
   Bombycodes cypraria, Guenée, Spec. Gén. Lép. Vol. 10, p. 219 (1858).
   Orthostixis hügeli, Felder, Reise Novara, Lep. Het. t. 130, f. 19 (1875) (bon. sp. sec. Swinhoe, Trans. Ent. Soc. Lond. p. 168 [1894]).
   Orthostixis textilis, Staudinger, Cat. Lep. (ed. 3), p. 322 (1901).
2. *N. guttulata*, Warren (præc. var. ?). — Borneo, Sumatra, ?Philippines.
   Naxa guttulata, Warren, Novit. Zool. Vol. 1, p. 377 (1894).

SECTION II. — Antenna thick with double serrations in both sexes (*Psilonaxa*, Warren).

3. *N. seriaria*, Motschulsky. — W. China to Amur and Japan.
Orthostixis laetata, Bremer, Lep. Ost.-Sib. p. 84 (1864) (non Fabricius, nec Guenée).
Zerene seriaria, Motschulsky, Bull. Soc. Nat. Moscou, Vol. 39 (1), p. 196 (1866).
Zerene taicoumaria, De l'Orza, Lép. Jap. Expos. p. 48 (1869).
Orthostixis bremeraria, Staudinger, Cat. Lep. (ed. 2), p. 155 (1871).
Psilonaxa taicoumaria, Warren, Proc. Zool. Soc. Lond. p. 343 (1893).
Naxa seriaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 325 (1895).
Orthostixis textilis, var. *seriaria*, Staudinger, Cat. Lep. (ed. 3), p. 322 (1901).

4. *N. obliterata* (Warren) (præc. var.?). — India.
Psilonaxa obliterata, Warren, Proc. Zool. Soc. Lond. p. 343, t. 31, f. 10 (1893).
? [*Naxa*] *linteata*, Moore, ined. (fide Warren, loc. cit.).
Naxa seriaria (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 325 (1895).

5. *N. angustaria*, Leech. — **Pl. 1, Fig. 14.** — Central China.
Naxa angustaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 19, p. 545 (1897).

89. GENUS CENTRONAXA, NOV. GEN., PROUT

Centronaxa, nov. gen. Prout.

Naxa, sect. 2. Hampson, Fauna Ind. Moths, Vol. 3, p. 325 (1895) (nec Walker).

Characters. — Face slightly protuberant, with appressed scales. Palpus minute, subascending, second joint rough-scaled. Tongue developed. Antenna scarcely two-fifths, in ♂ bipectinate almost to apex, the pectinations subclavate, moderate or long, decreasing in length towards apex, in ♀ more shortly bipectinate. Thorax slightly hairy beneath. Legs not long. Femora nearly glabrous. Hindtibia in ♂ much dilated, in both sexes with a pair of short terminal spurs. Tarsi not spinulose (**Fig. 12**). Abdomen not long. Wing-expanse 39-58 mm. Wings thinly scaled. Frenulum present. Forewing with costa slightly less arched and apex less rounded (at least in the typical species) than in *Naxa*, cell over one-half, discocellulars straight, little oblique, SC^1 out of C, SC^{2-3} stalked from cell, anastomosing strongly with SC^1, SC^3 later anastomosing with SC^4, SC^{4-5} stalked from before apex of cell, radials normal, but (together with SC^5) more curved than in *Naxa*, M^1 separate from R^3; hindwing with cell over one-half, discocellulars nearly straight, DC^2 slightly oblique outwards, DC^3 more vertical (thus reversing the more normal course, as seen in *Naxa*), C approximated to cell near base, connected by a short, weak, oblique bar, SC^2 separate from R^1, radials normal, M^1 separate from R^3.

FIG. 12

Hindleg of *Centronaxa orthostigialis*, Warren, ♂.

Early stages unknown.

A compact genus, and — in spite of its evident relationship and great superficial similarity to *Naxa* — quite clearly defined by the presence of frenulum, spurs on the hindtibia and slight but constant differences in the venation.

Type of the genus : *Centronaxa orthostigialis* (Warren) = *Naxa orthostigialis*, Warren.

Geographical distribution of species. — India to China.

1. *C. orthostigialis* (Warren). — N. India.
Naxa orthostigialis, Warren, Proc. Zool. Soc. Lond. p 343 (1893).

2. *C. margaritaria* (Leech). — Central China.
Naxa margaritaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 19, p. 545 (1897).

3. *C. montanaria* (Leech). West and Central China.
Naxa montanaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 19, p. 546 (1897).
4. *C. contraria* (Leech). Central China.
Naxa contraria, Leech, Ann. Mag. Nat. Hist. (6), Vol 19, p. 546 (1897).

90. Genus ASPILONAXA, Warren

Aspilonaxa. Warren, Novit. Zool. Vol. 4, p. 386 (1897).

Characters. — Face somewhat protuberant, with closely appressed scales. Palpus moderate, slender, subascending. Tongue developed. Antenna about two-thirds the length of wing, filiform or minutely serrulate in both sexes. Thorax somewhat hairy beneath. Femora hairy. Hindtibia with a pair of minute terminal spurs, in ♂ broadly spatulate, with strong hair-pencil. Wing-expanse 38-42 mm. Frenulum developed. Forewing with costa very faintly curved, apex slightly produced, distal margin oblique, cell very little more than one-half, SC^{1-3} stalked from near end of cell, their stalk anastomosing with C, SC^3 later anastomosing with SC^4, SC^{4-5} stalked from close to (or even from a point or minute stalk with) SC^{1-3}, radials normal, M^1 separate from R^3; hindwing with C rather remote from SC, though subparallel nearly to end of cell, SC^2 separate from R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

Type of the genus : *Aspilonaxa obliquaria* (Leech) = *Naxa obliquaria*, Leech = *Aspilonaxa lineata*, Warren (1897).

Geographical distribution of species. — W. China.

1. *A. obliquaria* (Leech). W. China.
Naxa obliquaria, Leech, Ann. Mag. Nat. Hist. (6), Vol. 19, p. 546 (1897).
Aspilonaxa lineata, Warren, Novit. Zool. Vol. 4, p. 387 (1897).

91. Genus OZOLA, Walker

Ozola. Walker, List Lep. Ins. Brit. Mus. Vol 24, p. 1080 (1862).
Carima. Walker, ibidem, Vol. 26, p. 1630 (1862).
Zarmigethusa. Walker, ibidem, p. 1637 (1862).
Desmobathra. Meyrick, Trans. Ent. Soc. Lond. p. 198 (1886).
Tosaura. Swinhoe, ibidem, p. 15 (1892).
Pampsila. Zeller, MS. (in coll. Brit. Mus).

Characters. — Face smooth. Palpus rather short to moderate, rough-scaled, third joint short, not distinct. Tongue developed. Antenna rather long, in ♂ with fascicles of long fine cilia, in ♀ subserrate with very minute ciliation. Thorax hardly hairy beneath. Legs rather long, the middle somewhat longer than the hind pair. Femora glabrous. Foretarsus long. Hindtibia in ♂ more or less dilated, always with hair-pencil, in both sexes with one well-developed median spur and two, often shorter, terminal spurs. Tarsi scarcely spinulose (Fig. 13). Abdomen rather long and slender. Wing-expanse 18-37 mm. Frenulum present. Forewing elongate, commonly falcate at apex, sometimes with deep excision below, then gibbous at end of R^3, SC^1 from close to SC^{3-5}, anastomosing strongly with C, then immediately with SC^{3-4}, SC^2 absent, SC^{3-5} stalked from well before apex of cell, radials normal, M^1 well separated from R^3; hindwing with C remote from SC, connected by a strong bar near base, SC^2 separate from R^1, radials normal, M^1 well separated from R^3 (**Pl. 2,**

Fig. 13

Hindleg of *Ozola falcipennis*, Moore, ♂.

Fig. 13). ♂ genitalia with a long, dentate or spinose club arising from the upper edge of the base of the « sacculus », perhaps representing the « clavus » of Pierce; penis long, thin, parallel. Burrows finds no other features in common in the two species which he has investigated (*falcipennis* and *picaria*).

Early stages. — Hardly known; the larva of *O. microniaria* is referred to and figured by Moore, *Lep. Ceyl.* Vol. 3, p. 474, t. 204, f. 10*a*. but without detail.

Type of the genus : *Ozola microniaria,* Walker (1862).

Geographical distribution of species. — India to Polynesia; one species in South Africa.

SECTION I. — Forewing with apex more or less falcate (*Ozola,* Walker).

1. *O. microniaria*, Walker. — India with Ceylon, ?? Philippines.
   Ozola microniaria, Walker, List Lep. Ins. Brit. Mus Vol. 24, p. 1080 (1862).
   Phibalapteryx acutata, Walker, ibidem, Vol. 25, p. 1340 (1862).
2. *O. minor* (Moore) (præc. var.?). — India.
   Zarmigethusa minor, Moore, Lep. Coll. Atkinson, p. 264 (1888).
3. *O. impedita* (Walker).
   a. *Ozola impedita impedita.* — N. India to Borneo.
   Acidalia impedita, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 766 (1861).
   Zarmigethusa biangulifera, Moore, Lep. Coll. Atkinson, p. 263 (1888).
   Ozola biangulifera, Swinhoe, Trans. Ent. Soc. Lond. p. 168 (1894).
   Ozola impedita, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 331 (1900).
   b. *Ozola impedita japonica.* — Japan.
   Ozola impedita japonica, nov. subsp. (1), Prout.
4. **O. sinuicosta, nov. sp.**(2), Prout (præc. form.?). — N. India.
   Ozola biangulifera (part.), Hampson, Fauna Ind. Moths, Vol. 3, p. 329 (1895) (nec Moore).
5. *O. extersaria* (Walker). — India to Malayasia.
   Macaria extersaria, Walker, List Lep. Ins. Brit. Mus. Vol. 23, p. 926 (1861).
   Zarmigethusa extersaria, Cotes & Swinhoe, Cat. Moths India (4), p. 543 (1888).
   Ozola extersaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 328, f. 161 (1895).
6. *O. basisparsata* (Walker). — Borneo, Penang.
   Carima basisparsata, Walker, List Lep. Ins. Brit. Mus. Vol 26, p. 1631 (1862).
   Ozola basisparsata, Warren, Novit. Zool. Vol. 6, p. 15 (1899).
   Ozola dissimilis (Warren, MS., in coll. Brit. Mus.), Meyrick, Trans. Ent. Soc. Lond. p. 74 (1897) (nom. nud.).
7. *O. macariata* (Walker). — N. India to New Guinea.
   Zarmigethusa macariata, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1637 (1862).
   Macaria elongaria, Snellen, Tijdschr. v. Ent. Vol. 24, p. 86, t. 10, f. 3 (1881).
   Desmobathra macariata, Meyrick, Trans. Ent. Soc. Lond. p. 482 (1889).
   Ozola macariata, Hampson, Fauna Ind. Moths, Vol. 3, p. 328 (1895).
   Ozola indefensa, Warren, Novit. Zool. Vol. 6, p 16 (1899) (var. ?).
8. *O. falcipennis* (Moore). — N. India.
   Metabraxas falcipennis, Moore, Lep. Coll. Atkinson, p 266, t. 8, f. 29 (1888).

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(1) **Ozola impedita japonica, nov. subsp.** — Differs from typical *impedita* in more ochreous tone, sharper and uninterrupted lines, the inner on forewing scarcely angulated in cell, a distinct, gently-curved median line on hindwing which is almost absent in typical *impedita*, subterminal black spots distinct throughout both wings, cell-spot of hindwing small (almost as in *sinuicosta*), underside much more unicolorous than in the type, with the apical cloud only quite weakly differentiated. Discocellulars of hindwing as in typical *impedita*. Kiushiu (two Nagasaki), three examples in coll. Br. Mus.

(2) **Ozola sinuicosta, nov. sp.** — ♂, 29 31 mm. Has hitherto been mixed with *impedita*, but differs very markedly in shape, in the course of the discocellulars of hindwing, etc. Forewing with apex more strongly falcate, costa and distal margin both strongly incurved before it, hindwing with discocellulars straight or nearly so, DC^3 very little oblique. Colour fleshy-ochreous, lines fine and distinct, including a gently-curved or nearly straight median on hindwing which is not observable in *impedita*, discal spots on both wings reduced to mere dots, undersurface of forewing with the apex much less conspicuously dark-suffused than in *impedita*. Khasis and Sikkim. Type (♂, Khasis) in coll. L. B. Prout, several examples in coll. L. B. Prout, coll. Br. Mus., etc. Unless this be a remarkably specialized seasonal form of *impedita*, it must be a perfectly distinct species. The fact that *Ozola impedita japonica* is in some respects intermediate between the two Indian forms might be held to favour the former explanation, but there is absolutely no evidence thereof; in any case, the form requires a separate name.

Tosaura falcipennis, Swinhoe, Trans. Ent. Soc. Lond. p. 16 (1892).
Ozola falcipennis, Hampson, Fauna Ind. Moths, Vol. 3, p. 327 (1895).

9. *O. marginata*, Warren. — Moluccas, New Guinea.
Ozola marginata, Warren, Novit. Zool. Vol. 3, p. 358 (1896); Vol. 5, p. 421 (1898).
Macaria atrofasciata, Pagenstecher, Jahrb. Nassau. Ver. Vol. 37, p. 260 (1884).
Pampsila productata, Zeller, MS. (in coll. Brit. Mus.).

10. *O. pulverulenta*, Warren. — Natal.
Ozola pulverulenta, Warren, Novit. Zool. Vol. 4, p. 30 (1897).
Ozola pulverulenta, ab. *fasciata*, Warren, ibidem, p. 30 (1897) (ab.).

11. *O. decolorata*, Warren. — Bali.
Ozola decolorata, Warren, Novit. Zool. Vol. 4, p. 207 (1897).

12. *O. incompleta*, Warren (præc. var.?). — Flores to New Guinea.
Ozola incompleta, Warren, Novit. Zool. vol. 6, p. 16 (1899).

13. *O. sinuata*, Warren. — Sumba.
Ozola sinuata, Warren, Novit. Zool. Vol. 4, p. 387 (1897).

14. *O. exigua*, Swinhoe. — Claremont Islands.
Ozola exigua, Swinhoe, Trans. Ent. Soc. Lond. p. 645 (1902).
Ozola indefensa (part.), Warren, Novit. Zool. Vol. 6, p. 16 (1899).

15. *O. leptogonia*, Hampson. — Ceylon.
Ozola leptogonia, Hampson, Journ. Bombay Nat. Hist. Soc. Vol. 14, p. 511 (1902).

16. *O. convergens*, Warren. — Ceylon.
Ozola convergens, Warren, Novit Zool. Vol. 12, p. 419 (1905).

17. *O. acrophaea* (Meyrick) (trans. ad Sect. II). — New Hebrides.
Desmobathra acrophaea, Meyrick, Trans. Ent. Soc. Lond. p. 199 (1886).

SECTION II. — Forewing with apex not falcate (*Desmobathra*, Meyrick; type, *D. niphoplaca*, Meyrick, nobis select.).

18. *O. niphoplaca* (Meyrick). — Solomons, Shortlands Isl.
Desmobathra niphoplaca, Meyrick, Trans. Ent. Soc. Lond. p. 199 (1886).

19. *O. hesperias* (Meyrick). — New Hebrides.
Desmobathra hesperias, Meyrick, Trans. Ent. Soc. Lond. p. 198 (1886).

20. *O. picaria* (Swinhoe). — **Pl. I, Fig. 2.** — N. India.
Tosaura picaria, Swinhoe, Trans. Ent. Soc. Lond. p. 16, t. 1, f. 16 (1892).
Ozola picaria, Hampson, Fauna Ind. Moths, Vol. 3, p. 327 (1895).

21. *O. plana* (Warren). — Loyalty Islands.
Desmobathra plana, Warren, Novit. Zool. Vol. 1, p. 380 (1898).

22. *O. albimacula* (Warren). — Moluccas.
Eumelea albimacula, Warren, Novit. Zool. Vol. 4, p. 29 (1897).
Desmobathra albimacula, Warren, ibidem, Vol. 12, p. 419 (1905).

23. *O. spilotis*, Meyrick. — Sambawa.
Ozola spilotis, Meyrick, Trans. Ent. Soc. Lond. p. 74 (1897).

92. GENUS DERXENA, WALKER

Derxena, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1615 (1866).

Characters. — Face smooth. Palpus moderate, loosely scaled. Tongue present. Antenna rather more than one-half the length of forewing, in ♂ with moderate ciliation, in ♀ simply pubescent. Legs slender. Femora glabrous. Middle tibia finely ciliated, with very minute terminal spurs. Hind-tibia with exceedingly minute terminal spurs, in ♂ somewhat dilated, with hair-pencil. Wings-expanse 20-28 mm. Wings delicately built, somewhat hyaline. Frenulum present. Forewing with apex not acute, SC^1 anastomosing with C, sometimes also with SC^{3-4}, SC^2 absent, SC^{3-5} stalked from well

before apex of cell, radials normal, M^1 well separated from R^3; hindwing with C remote from SC, connected by a stong bar near base, the « basal cell » vitreous, SC^2 separate from or very shortly stalked with R^1, radials normal, M^1 separate from R^3.

Early stages unknown.

This genus has several points in common with *Derambila* and *Corium*, in Group II; indeed Pagenstecher (*Zoologica*, Vol. 29, p. 142) considers it identical with the former. There are, however, apart from the shape of the apex, important differences, notably the hindwing structure, which necessitates its inclusion in Group III, and preferably in the vicinity of *Ozola*, with which it shares the lack of SC^2, etc.

Type of the genus : *Derxena coelivagata*, Walker (1866).

Geographical distribution of species. — Malaysia to Solomons.

1. *D. coelivagata*, Walker. — Aru Islands to New Guinea, ? Batchian, ? Mysol.
   Derxena coelivagata, Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1615 (1866).
   Zanclopteryx coerulea [*caerulea*, Iris. Vol. 1, p. 88 (1886) indescr.], Pagenstecher, Jahrb. Nassau. Ver. Vol. 39, p. 156 (1886).
2. **D. aluaria** (Swinhoe, MS.), **nov. sp.** (1), Prout (præc. subsp. ?). — New Britain to Solomons.
   Derxena coelivagata, Meyrick, Trans. Ent. Soc. Lond. p. 290 (1886) (nec Walker).
   Rambara coelivagata, Pagenstecher, Zoologica, Vol. 29, p. 142 (1900).
3. *D. nivea* (Kirsch). — New Guinea.
   Acidalia nivea, Kirsch, Mitt. Zool. Mus. Dresden, Vol. 1, p. 134, t. 6, f. 10 (1877).
   Derxena coelivagata, ab. *nivea*, Swinhoe, Lep. Het. Oxf. Mus. Vol. 2, p. 329 (1900).
4. *D. discata*, Warren (præc. ab.?) — New Guinea.
   Derxena discata, Warren, Novit. Zool. Vol. 4, p. 206 (1897).
   Derxena coelivagata, ab *discata*, Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 329 (1900).

93. Genus CELERENA, Walker

Celerena, Walker, Trans. Ent. Soc. Lond. (3), Vol. 1, p. 71 (1862).
Bociraza, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 194 (1864) (nov. syn.).

Characters. — Face smooth, though slightly protuberant. Palpus moderate, or occasionally rather short, second joint shortly rough-scaled, third joint moderate, nearly cylindrical. Tongue present. Antenna more than one-half the length of forewing, in ♂ shortly ciliated and usually with a ridge or tuft of projecting scales in middle, the segments distally to this with short paired bristles, in ♀ minutely ciliated. Thorax densely hairy beneath, and usually with a dense expansible tuft between second and third pairs of legs. Femora fringed with hair, hindfemur of ♂ thickened. Hindtibia of ♂ greatly dilated, with strong expansible hair-tuft, long, crooked median spurs, and a single, stout (inner) terminal spur, tibial epiphysis prolonged into a strong horny process. Tarsi somewhat spinulose, first tarsal joint of ♂ swollen on its inner side. Hindleg of ♀ normal, all spurs present. Abdomen of ♂ beneath usually with strong tufts of hair. Wing-expanse 40-68 mm. Frenulum present. Forewing elongate, in ♂ usually with deep furrow or pocket beneath in cell, the fold overhanging it fringed with long scales or hairs

(1) **Derxena aluaria, nov. sp.** — ♂ ♀, 20-22 mm. Shape and colour of *D. coelivagata*, of which it might be regarded as a subspecies, differing only (though constantly) in the possession of a distinct dark brown-grey discal dot on each wing, both on the upper and the under surface. From *nivea*, Kirsch, and *discata*, Warren (= *nivea* ab. ?) it is distinguished by its smaller size, bluer colour and *small* discal dots, as well as by somewhat less rounded wings. Types (♂ ♀) from Alu, Solomons, in coll. Brit. Mus.; also further examples from Alu and from other islands of the group, and from New Britain.

(the structure varying somewhat in the different species), cell one-half, DC^2 vertical or almost oblique inwards, DC^3 strongly oblique outwards, SC^{1-2} stalked, their stalk anastomosing strongly with C, SC^2 subsequently approximated or appressed to the stalk of SC^{3-4}, sometimes even anastomosing at a point, SC^{3-5} stalked from shortly before apex of cell, radials normal, M^1 separate from R^3; hindwing with cell one-half, discocellulars as in forewing, C somewhat remote from SC, connected by a bar near base, SC^2 separate from R^1; radials normal, M^1 separate from R^3.

Early stages unknown.

The remarkable secondary sexual characters (scent-organs, etc.) of this genus have attracted some attention, and are more or less fully discussed or figured in the following places : *Mitt. Dresd. Mus.* Vol. 1, p. 132 (Kirsch), *Trans. Ent. Soc. Lond.* p. 197 (1886) (Meyrick), *Fauna Ind. Moths*, Vol. 3, p. 319 (Hampson), *Iris*, Vol. 1, p. 177, 328 (Haase); see also Oberthür, *Etudes*, Vol. 19, p. 36, t. 5, f. 29. The species which have hitherto been treated as generically distinct, under the name of *Bociraza*, show, on the whole, less extreme developments in this direction, and can perhaps be maintained as a separate section. In them the ♂ lacks the ridge of scales on the antenna, the extreme tufting beneath thorax and abdomen and the cell-fold of forewing, while the first joint of the tarsus is less broadly swollen; yet there are variations in degree in some of these specializations even among species of the *Celerena* section. A slight venational difference — in the earlier forking of SC^{1-2} in the section *Bociraza*, with SC^2 deflected so as to be approximated to the stalk of SC^{3-5} instead of only to that of SC^{3-4} — is apparently inconstant, at least in degree.

Type of the genus : *Celerena divisa*, Walker (1862).

Geographical distribution of species. — India to New Guinea.

SECTION I. — ♂ with furrow or pocket in forewing beneath; sexual hair-tufts highly developed (*Celerena*, Walker).

1. *C. divisa*, Walker. — N. India to Borneo.
   Celerena divisa, Walker, Trans. Ent. Soc. Lond. (3), Vol. 1. p 72 (1862).
2. *C. perithea* (Cramer). — Amboina to New Guinea.
   Phalaena Noctua perithea, Cramer, Pap. Exot. Vol. 2, p. 116, t. 172, f. D (1777).
   Callimorpha perithea, Verloren, Ins. Lep. Crameri, p. 71 (1837).
   Celerena perithea, Felder, Reise Novara, Lep. Het. t. 130, 20 (1875).
3. *C. lerne* (Boisduval). — Mysol to New Guinea.
   Callimorpha lerne, Boisduval, Voy. Astrolabe, Ent. Vol. 1, p. 207, t. 5, f. 2 (1832).
   Celerena lerne, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 166 (1864).
   Celerena lerna, Pagenstecher, Jahrb. Nassau. Ver. Vol. 39, p. 164 (1886).
   Celerena bimarginata, Walker, MS. (fide Swinhoe, Lep. Het. Oxf. Mus. Vol. 2, p. 324).
4. *C. mutata*, Walker. — Celebes to New Guinea.
   Celerena mutata, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 167 (1864).
   Celerena eucnemis, Felder, Reise Novara, Lep. Het. t. 130, p, 30 (1875) (var. ?) (bon. sp. sec. Swinhoe, Lep. Het. Oxford Mus. Vol. 2, p. 325).
5. *C. commutata*, Walker. — **Pl. 1, Fig. 1.** — Aru Islands.
   Celerena commutata, Walker, List Lep. Ins. Brit Mus. Vol 31, p. 167 (1864).
6. *C. connexa*, Walker.
   a. *Celerena connexa connexa*. — Amboina.
      Celerena connexa, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 168 (1864).
      Celerena stenospila, Warren, Novit. Zool. Vol. 1, p. 377 (1894) (nov. syn.).
   b. *Celerena connexa obiana*. — Oby, Waigeu.
      Celerena connexa obiana (Fruhstorfer, MS.), **nov. subsp.** (1), Prout.

(1) **Celerena connexa obiana, nov. subsp.** — Forewing with the basal yellow part restricted, not reaching inner margin, hindwing with black border very broad, and extending along inner margin to near base. Oby (type) and Waigeu, in coll. Brit. Mus. Has been distributed under the name of *Celerena obiana* by Fruhstorfer and seems constant in these localities, though the difference from typical *connexa* is but slight.

Celerena connexa, var. β, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 169 (1864).

c. *Celerena connexa vulgaris* (bon. sp. ?). — New Guinea.
Celerena vulgaris, Butler, Proc. Zool. Soc. Lond. p. 768 (1876).
Celerena proxima, Meyrick, Trans. Ent. Soc. Lond. p. 197 (1886) (nec Walker) (ab. ?).

7. *C. proxima*, Walker. — Celebes.
Celerena proxima, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 168 (1864).

8. *C. spreta*, Walker. — Malaysia to New Guinea.
Celerena spreta, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 169 (1864).
Celerena chrysauge, Felder, Reise Novara, Lep. Het. t. 130, f. 20 (1875).

9. *C. andamana*, Felder. — Andamans.
Celerena andamana, Felder, Reise Novara, Lep. Het. t. 130, f. 18 (1875).

10. *C. siamica*, Swinhoe (præc. var. ?). — Siam.
Celerena siamica, Swinhoe, Ann. Mag. Nat. Hist. (7) Vol. 11, p. 510 (1903).

11. *C. prodroma*, Meyrick. — New Guinea.
Celerena prodroma, Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 1, p. 246 (1886).

12. *C. palawanica*, Pagenstecher. — Philippines.
Celerena palawanica, Pagenstecher, Iris, Vol. 3, p. 31 (1890).

13. *C. pallidicolor*, Warren. — Moluccas.
Celerena pallidicolor, Warren, Novit. Zool. Vol. 1, p. 377 (1894).

14. *C. cana*, Warren. — Fergusson Island.
Celerena cana, Warren, Novit. Zool. Vol. 3, p. 281 (1896).

15. *C. griseofusa*, Warren. — Fergusson Island.
Celerena griseofusa, Warren, Novit. Zool. Vol. 3, p. 281 (1896).

16. *C. triflava*, Warren. — New Guinea.
Celerena triflava, Warren, Novit. Zool. Vol. 3, p. 356 (1896).

17. *C. signata*, Warren. — Sumatra, Borneo.
Celerena signata, Warren, Novit. Zool. Vol. 5, p. 231 (1898).
Celerena nigripalpis, Swinhoe, Trans. Ent. Soc. Lond. p. 642 (1902) (ab. ?) (nov. syn.).

18. *C. aurata*, Warren. — Louisiade Archipelago.
Celerena aurata, Warren, Novit. Zool. Vol. 6, p. 325 (1899).

19. *C. exacta*, Warren. — Solomons.
Celerena exacta, Warren, Novit. Zool. Vol. 6, p. 325 (1899).

20. *C. mitis*, Warren. — Louisiade Archipelago.
Celerena mitis, Warren, Novit. Zool. Vol. 6, p. 325 (1899).

21. *C. hirtipes*, Warren. — British New Guinea.
Celerena hirtipes, Warren, Novit. Zool. Vol. 10, p. 348 (1903).

22. *C. nigriceps*, Warren. — British New Guinea.
Celerena nigriceps, Warren, Novit. Zool. Vol. 10, p. 348 (1903).

23. *C. substigmaria*, Warren. — Moluccas.
Celerena substigmaria, Warren, Novit. Zool. Vol. 11, p. 485 (1904).

SECTION II. — ♂ without furrow or pocket in forewing beneath, sexual hair-tufts not highly developed (*Bociraza*, Walker).

24. *C. recurvata* (Walker). — Batchian, Gilolo, Timor.
Bociraza recurvata, Walker, List Lep. Ins. Brit. Mus. Vol. 31, p. 194 (1864).
Milionia flavotogata, Pagenstecher, Ent. Nachr. Vol. 22, p. 53 (1896).
Milionia flavotagata, Pagenstecher, Abh. Senckenb. Ges. Frankfurt. Vol. 23, p. 459, t. 19, f. 5 (1897).

25. *C. reversa* (Warren) (præc. var. ?). — Oby.
Bociraza reversa, Warren, Novit. Zool. Vol. 4, p. 28 (1897).

26. *C. latiflava* (Warren). — New Guinea.
Bociraza latiflava, Warren, Novit. Zool. Vol. 3, p. 356 (1896).
Bociraza latiflava, ab. *restricta*, Warren, ibidem, Vol. 6, p. 324 (1899) (ab.).

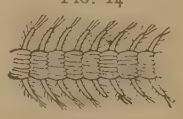
Note. — « *Celerena* » *tricolor*, Felder, *Reise Novara, Lep. Het.* t. 130, f. 10, is a *Milionia* (sens. lat.); *C. ribbei*, Pagenstecher, *Jahrb. Nassau. Ver.* Vol. 39, p. 164, a *Bracca*. « *Bociraza* » *vacuna*, Druce, *Proc. Zool. Soc. Lond.* p. 576 (1888), *goldiei*, Druce, ibidem, p. 781 (1882) and *separata*, Druce, ibidem, have been referred by Warren to a new genus, *Automolodes*, in the same group.

94. Genus ALETIS, Hübner

Aletis. Hübner, Verz. bek. Schmett. p. 179 (1826 ?).

Characters. — Face with appressed scales. Palpus short, porrect, second joint somewhat rough-scaled, third joint small, obtuse. Tongue developed. Antenna short, stout, in ♂ with very short pectinations bearing fascicles of cilia (**Fig. 14**), in ♀ shortly ciliated. Thorax hairy beneath. Legs rather short and strong. Femora glabrous, hindtibia not dilated in ♂, in both sexes without median spurs, terminals short. Tarsi spinulose. Abdomen rather long. Wing-expanse 54-74 mm. Frenulum well developed, retinaculum in ♂ strong and compact. Forewing elongate, costa arched, distal margin gently curved, apex rounded, cell long, narrow at extremity, discocellulars somewhat inangled, SC^{1-2} stalked from just before one-half of cell, SC^2 anastomosing strongly with SC^{3-4}, SC^{3-5} stalked from well before apex of cell, R^2 slender, M^1 well separated from R^3, SM^3 weak; hindwing elongate, with distal margin weakly curved, cell somewhat over one-half, discocellulars somewhat inangled, C separate from SC, but connected by a bar near base, SC^2 usually long-stalked with R^1 (rarely short-stalked, very exceptionally connate), R^2 slender but perfect, M^1 well separated from R^3 (**Pl. 2, Fig. 14**).

Fig. 14



Section of antenna of *Aletis helcita*, Clerck, ♂.

Early stages unknown.

An interesting genus, on account of its non-Geometrid aspect and its entering into the Müllerian mimetic group of *Danaida chrysippus*. Snellen (*Tijdschr. v. Ent.* Vol. 38, p. 179) inclined to refer it to the *Aganaidae* (= *Hypsidae*), with which he considered that the palpus, the costal venation of the hindwing, etc., united it; but the abdominal sensory cavity is typically Geometrid, and we consider the venation to be so likewise. The retinaculum, the stout antenna, the subcostal venation of the forewing and perhaps some other points of structure in this and the following genus suggest the tribe *Cyllopodicae* of the *Acidaliinae*.

Type of the genus : *Aletis helcita* (Clerck) = [*Papilio*] *helcita*, Clerck (1826 ?).

Geographical distribution of species. — Æthiopian.

1. *A. helcita* (Clerck). Tropical Africa.

[*Papilio*] *helcita*, Clerck, Icon. Ins. Rar. Vol. 2, t. 39 [4] (1764).
Papilio helcita, Linné, Amœn. Acad. Vol. 6, p. 405 (1764).
Phalaena fascelis, Linné, Mus. Lud. Ulr. p. 390 (1764).
[*Phalaena*] *helcita*, Cramer, Pap. Exot. Vol. 2, p. 48, t. 129, f. C (1777).
Phalaena Attacus helcita, Cramer, ibidem, p. 149 (1777 ?).
Papilio fuscofasciatus, Goeze, Ent. Beytr. Vol. 3 (1), p. 121 (1779).
Phalaena macularia, Fabricius, Spec. Ins. Vol. 2, p. 246 (1781) (nec Linné, 1758).
Phalaena Noctua helcita, Drury, Ill Nat. Hist. Vol. 3, index (1782).
Aletis helcita, Hübner, Verz. bek. Schmett. p. 179 (1826 ?).
Callimorpha helcita, Verloren, Ins. Lep. Crameri, p. 58 (1837).
Aletis druryi, Butler, Proc. Zool. Soc. Lond. p. 386 (1878).
Aletis rubricaput, Swinhoe, Trans. Ent. Soc. Lond. p. 578 (1904) (var. artif. ?) (nov. syn.).

2. *A. erici*, Kirby. E. Africa.
Aletis erici, Kirby, Ann. Mag. Nat. Hist. (6), Vol. 18, p. 382 (1896).

NOTE. — « *Aletis* » *postica*, Walker, *Proc. Nat. Hist. Soc. Glasgow*, Vol. 1 (2), p. 332 (1869), the type of *Mimaletis*, Warren, belongs to the *Geometrinae* (see supra), though superficially very similar to the present genus, belonging to the same mimetic association. « *Aletis* » *flammea*, Schaus & Clements, *Sierra Leone Lep.* p. 24 (1893) is unknown to us, but evidently Aganaid, sens. lat. (genus *Neuroxena*?); *cunaxa*, Druce, *Proc. Zool. Soc. Lond.* p. 671 (1887) is probably a *Terina*.

95. GENUS CARTALETIS, WARREN

Cartaletis. Warren, Novit. Zool. Vol. 1, p. 378 (1894); Swinhoe, Trans. Ent. Soc. Lond. p. 579 (1904).
Leptaletis. Warren, ibidem, p. 379 (1894); Swinhoe, ibidem, p. 579 (1904) (nov. syn.).

Characters. — Face smooth. Palpus short, porrect, second joint rough-scaled, third joint small, pointed. Tongue developed. Antenna short, stout, in ♂ bipectinate almost to apex, the pectinations decreasing rapidly in length apically, in ♀ shortly ciliated. Thorax hairy beneath. Legs rather short and stout in the typical form, less so in the section *Leptaletis*. Femora glabrous. Hindtibia not dilated, without median spurs, terminals short. Wing-expanse 38-60 mm. Wings shaped as in *Aletis*. Frenulum developed, retinaculum strong and compact. Forewing with cell long, SC^1 and SC^2 arising separately, anastomosing shortly, SC^2 later anastomosing shortly with SC^{3-4}, SC^{3-5} stalked from well before apex of cell, R^2 slender, often from nearer (sometimes much nearer) to R^3 than to R^1, M^1 well separated from R^3; hindwing with cell somewhat over one-half, C separate from SC, but connected by a bar near base, SC^2 long-stalked with R^1, R^2 slender but perfect, M^1 well separated from R^3.

Early stages unknown.

Nearly related to the preceding genus, differing chiefly in the posession of a double areole. Swinhoe (loc. cit. supra) says that in the section *Leptaletis* (type, *variabilis*) the areole is simple, but this is certainly an error of observation. Like *Aletis*, this genus is mimetic; cfr. Rogers, *Trans. Ent. Soc. Lond.* p. 518, 522 (1908).

Type of the genus : *Cartaletis libyssa* (Hopffer) = *Aletis libyssa*, Hopffer (1894).

Geographical distribution of species. — Æthiopian.

SECTION I. — Build robust; ♂ antennal pectinations moderate or strong (*Cartaletis*, Warren).

1. *C. libyssa* (Hopffer). S. E. Africa.
Aletis libyssa, Hopffer, Monatsber. Akad. Wiss. Berlin, p. 422 (1857).
Cartaletis libyssa, Warren, Novit Zool. Vol. 1, p. 378 (1894)

2. *C. monteironis* (Druce) (præc. var. prob. sec. Rogers, Trans. Ent. Soc. Lond. 1908, p. 519). Portuguese East Africa to Natal.
Aletis monteironis, Druce, Ent. M. Mag. Vol. 20, p. 156 (1883); Waterhouse, Aid, t 172, f. 2 (1886).
Cartaletis monteironis, Swinhoe, Trans. Ent. Soc. Lond. p. 580 (1904).

3. *C. ethelinda* (Kirby) (*libyssa* var.?). British East Africa.
Aletis ethelinda, Kirby, Ann. Mag. Nat. Hist. (6), Vol. 18, p. 381 (1896).
Cartaletis ethelinda, Swinhoe, Trans. Ent. Soc. Lond. p. 579 (1904).
Aletis libyssa, var. (?) *ethelinda*, Rogers, ibidem, 1908, p. 522 (1909).

4. *C. forbesi* (Druce). — West Africa.
Aletis forbesi, Druce, Proc. Zool. Soc. Lond. p. 227, t. 17, f. 4 (1884).
Cartaletis flexilimes, Warren, Novit. Zool. Vol. 4, p. 28 (1897).
Leptaletis forbesi, Swinhoe, Trans. Ent. Soc. Lond. p. 579 (1904).

5. *C. concolor*, Warren, — Zululand, Uganda, N. Angola, Cameroons.
Cartaletis concolor, Warren, Novit. Zool. Vol. 12, p. 34 (1905).

SECTION II. — Build slender; ♂ antennal pectinations slender, not long (*Leptaletis*, Warren).

6. *C. variabilis* (Butler). — Angola, Uganda.
Aletis variabilis, Butler, Proc. Zool. Soc. Lond. p. 386 (1878).
Leptaletis variabilis, Warren, Novit. Zool. Vol. 1, p. 379 (1894).
Leptaletis variabilis, ab. *ampliflava*, Warren, ibidem, Vol. 12, p. 83 (1905) (ab.).

7. *C. gracilis* (Möschler). — **Pl. 1, Fig. 18** (1). — Gold Coast, Sierra Leone.
Amnemopsyche gracilis, Möschler, Abh. Senckenb. Ges. Frankf. Vol. 15, p. 73, f. 1 (1890).
Leptaletis pallida, ♂, Warren, Novit. Zool. Vol. 1, p. 379 (1894) (ab.) (nov. syn.).
Aletis alba, ♀, Druce, Ann. Mag. Nat. Hist. (6), Vol. 17, p. 351 (1896) (ab. — ead. ac præc.) (nov. syn.).

96. GENUS PARAPTYCHODES, WARREN

Paraptychodes, Warren, Novit. Zool. Vol. 1, p. 379 (1894).

Characters. — Face rough-scaled. Palpus moderate, second joint rough-scaled, third joint blunt. Tongue present. Antenna short, stout, bipectinate in both sexes with short, stout pectinations. Thorax hairy beneath. Femora nearly glabrous. Hindleg rather short, hindtibia in ♂ thickened, with two short spurs (Warren), in ♀ with four short spurs, the medians the shorter. Tarsi spinulose. Abdomen robust. Wing-expanse 37-45 mm. Frenulum present. Forewing with costa slightly arched, apex rounded, distal margin oblique, somewhat bowed below apex, tornus rounded, fovea present in ♂ (Warren), cell about two-thirds, narrow distally, discocellulars bicurved (DC^2 inwards, DC^3 outwards), SC^1 free, from nearly three-fourths of cell, SC^{2-3} usually stalked from about seven-eighths (SC^2 sometimes free), SC^3 anastomosing with (or sometimes arising from) SC^4, SC^{4-5} stalked from close to R^1, R^2 from slightly nearer to R^3 than to R^1, M^1 separate from R^3; hindwing with distal margin moderately rounded, angles rounded, cell more than one-half, C somewhat approximated to SC to beyond one-half, thence gradually diverging, the connective basal bar apparently oftenest wanting, SC^2 and R^1 approximated or connate (in the type-specimen, exceptionally, very shortly stalked), R^2 and M^1 as in forewing.

Early stages unknown.

Probably related to the two preceding genera, as has always been assumed. It is, however, not impossible that it will prove, with increasing knowledge, to belong to a different section; the build of antenna, legs and abdomen is rather closely similar to that of *Petovia*. Rogers (*Trans. Ent. Soc. Lond.* 1908, p. 522) considers *Paraptychodes tenuis* « probably » associated mimetically with *Danaida chrysippus*, and the resemblance to *Aletis* may be in part due to this cause.

(1) We figure ab. *pallida*, Warren.

Type of the genus : *Paraptychodes tenuis* (Butler) = *Aletis tenuis*, Butler (1894).

Geographical distribution of species. — East Africa.

1. *P. tenuis* (Butler). East Africa.
   Aletis tenuis, Butler, Proc. Zool. Soc. Lond. p. 385 (1878).
   Terina fulva, Hampson, Ann. Mag. Nat. Hist. (6), Vol. 7, p. 183 (1891).
   Paraptychodes tenuis, Warren, Novit. Zool. Vol. 1, p. 370 (1894).
   Terina tenuis, Butler, Trans. Ent. Soc. Lond. p. 419 (1898).
2. *P. kedar* (Druce). Zanzibar to Mombasa.
   Aletis kedar, Druce, Ann. Mag. Nat. Hist. (6), Vol. 17, p. 351 (1896).

2. TRIBUS AMETRIDICÆ

Mecoceridæ. Guenée, Spec. Gén. Lép. Vol. 9, p. 387 (1858) (sed genus *Mecoceras*, Guenée, synon. est).
Eumeleinæ (part.). Warren, Novit. Zool. Vol. 1, p. 375 (1894) (nec sect. typ.).

A small and compact group of Neotropical moths, recalling *Eumelea* in the abnormal length of their antennæ and legs, but possessing various characters of their own, which justify their retention as a separate tribe.

General characters. — Large or moderate-sized wings, ample in both sexes, often with some special modification on the upper surface about the discocellulars, either a hyaline patch (*Macrotes*) or a tuft of raised scales (*Almodes*, *Ergavia*). Frenulum well developed. Forewing with all the five subcostals present, arising from a common, long stalk in the following order : $SC^{5, 1, 2, 3, 4}$; this stalk usually arising from the cell, exceptionally from a very small areole (SC^1 anastomosing with SC^{2-5}). Hindwing with cell rather short, discocellulars inangled, C closely approximated to SC to about one-half of cell, very exceptionally (we have only observed it in a single example of *Ametris nitocris*) connected by a short bar near base, SC^2 usually stalked with R^1, R^2 arising slightly above middle of discocellulars. Antenna very long (usually almost as long as forewing). Legs long, often irregular in the armature (*Ergavia*).

KEY TO THE GENERA

1. *Forewing with tuft of raised scales on the discocellulars* . . . . . 2.
   Forewing without tuft of raised scales on the discocellulars . . . . . 3.
2. *Frons not protuberant; hindtibia with armature normal* . . . . . 99. Genus Almodes, Guenée.
   Frons protuberant; hindtibia with armature not normal . . . . . 100. Genus Ergavia, Walker.
3. *Hindwing with large hyaline patch at end of cell* . . . . . 98. Genus Macrotes, Westwood.
   Hindwing without such patch. . . . . . 97. Genus Ametris, Hübner.

97. Genus AMETRIS, Hübner

Ametris. Hübner, Verz. bek. Schmett. p. 303 (1826?); Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, p. 26 (1856).
Mecoceras. Guenée, Spec. Gén. Lép. Vol. 9, p. 388 (1858).
Spongotarsis. Zeller, MS. (in coll. Brit. Mus.).

Characters. — Face slightly prominent, sloping, with appressed scales. Palpus moderate to rather long, second joint upcurved, fringed with long hair-scales below, third joint distinct, moderate to long, with appressed scales. Tongue well developed. Antenna nearly as long as forewing, in ♂ bipectinate with long, fine pectinations, each terminating in a single curved bristle, the apex simple, sparsely ciliated, in ♀ simple throughout, sparsely ciliated. Thorax hairy beneath. Legs long and slender. Femora hairy in ♂ (forefemur strongly tufted), nearly glabrous in ♀. Foretibia of ♂ tufted; hindtibia not dilated, all spurs present, normally placed, the inner of each pair the longer. Tarsi long, spinulose, foretarsus of ♂ with strong tuft on inner side of first joint. Wing-expanse 41-51 mm. Wings without special modification about the discocellulars. Frenulum developed. Forewing somewhat elongate, apex acute, no areole, M^1 approximated to R^3; hindwing with distal margin sinuate (*nitocris*) or strongly dentate (*bitactaria*), SC^2 connate or usually short-stalked with R^1, M^1 connate with or approximated to R^3 (**Pl. 2, Fig. 15**).

Egg. — Cylindrical, ends rounded, twelve low ribs stopping abruptly at micropylar end in a circle of quadrangular cells which surround the coarsely reticulated micropyle; ribs crested with white dots (Dyar, *Psyche*, Vol. 9, p. 59).

Larva. — Head rounded, body moderate, cylindrical, anal plate large, no cervical shield, tubercles small, setæ short (full life-history by Dyar, loc. cit.).

Pupa. — Light brown, with long projecting leg-cases.

Type of the genus : *Ametris nitocris* (Cramer) = *Phalaena Pyralis nitocris*, Cramer = *Ametris nitocritaria*, Herrich-Schäffer (1856).

Geographical distribution of species. — Tropical American.

1. *A. nitocris* (Cramer). — **Pl. 1, Fig. 3.** — Florida and Mexico to Amazons.
   Phalaena Pyralis nitocris, Cramer, Pap. Exot. Vol. 3, p. 148, t. 275, f. A (1780).
   Ametris nitocritaria, Hübner, Verz. bek. Schmett. p. 303 (1826 ?).
   Botys nitocris, Verloren, Ins. Lep. Crameri, p. 105 (1837).
   Mecoceras nitocritaria, Guenée, Spec. Gén. Lep. Vol. 9, p. 389 (1858).
   Mecoceras nitocris, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 606 (1861).
   Mecoceras peninsularia, Grote, Papilio, Vol. 3, p. 79 (1883) (var. ?).
   ? *Mecoceras schausaria*, H. Edwards, ibidem, Vol. 4, p. 18 (1884) (ab. ?).
2. *A. bitactaria* (Walker). — Jamaica.
   Mecoceras bitactaria, Walker, List Lep. Ins. Brit. Mus. Vol. 22, p. 607 (1861).

98. Genus MACROTES, Westwood

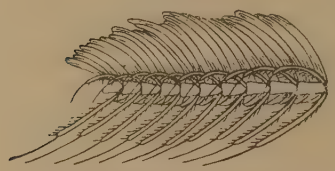
Macrotes(1). Westwood, in Duncan, Exot. Moths, p. 212 (1841).
Netrix. Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, p. 27 (1856).
Ametris. Guenée, Spec. Gén. Lép. Vol. 9, p. 387 (1858) (ex Hübner, Verz. bek. Schmett., nec sect. typ. Herrich-Schäffer restr.).

Characters. — Face strongly protuberant below, with appressed scales. Palpus porrect, long, especially in ♀, second joint long, moderately rough-scaled, third joint distinct, subtriangular, rather long in ♂, longer in ♀. Tongue developed. Antenna long, bipectinate in both sexes, the pectinations

(1) Not preoccupied by *Macrotis*, Dejean (1833).

long in the ♂, short in the ♀, each surmounted by a curved bristle; antennal shaft of ♂ clothed for a part of its length with long, neatly-compacted, curled silky hair-scales (**Fig. 15**). Thorax hairy beneath. Legs very long and slender. Femora hairy. Foretibia of ♂ with tufts of hair-scales in addition to the usual hair-pencil, foretarsus very long, its first joint in ♂ with a tuft of hair-scales (**Fig. 16**).

Fig. 15



Section of antenna of *Macrotes netrix*, Cramer, ♂

Fig. 16

Foreleg (extended) of *Macrotes netrix*, Cramer, ♂ (viewed from above).

Hindtibia with four unequal spurs, the inner median much longer than outer median. Tarsi with slender spinules. Abdomen extremely long and slender. Wing-expanse 55-60 mm. Forewing with apex acutely produced, distal margin somewhat scalloped, strongly elbowed at R^3, M^1 separate from R^3; hindwing elongate, distal margin strongly produced in middle, scalloped, a tooth at R^3 very pronounced, DC^3 strongly oblique, C appressed to cell to one-half, SC^2 usually stalked with R^1, M^1 usually connate with R^3.

Early stages. — Only known from the larval and pupal figures in Sepp, *Surin. Vlind.* p. 69, t. 31; larva elongate, cylindrical, head and apparently prothorax bifid, as in the *Hemileucinae;* pupa not subterranean, elongate, eyes prominent, long antenna- and leg-sheath, anal armature apparently strong.

Type of the genus : *Macrotes netrix* (Cramer) = *Phalaena Geometra netrix,* Cramer (1841).

Geographical distribution of species. — Neotropical.

1. *M. netrix* (Cramer). Central America to N. Brazil.
   Phalaena Geometra netrix, Cramer, Pap. Exot. Vol. 2, p. 87, 150, t. 151, f. E (1777).
   Phalaena netrata, Fabricius, Spec. Ins. Vol. 2, p. 254 (1781).
   Bombyx netrix, Olivier, Encycl. Méth. (Ins.), Vol. 5, p. 85 (1790).
   Ametris netricaria, Hübner, Verz. bek. Schmett. p. 303 (1826 ?).
   Phalaena netrix, Verloren, Ins. Lep. Crameri, p. 65 (1837).
   Macrotes netrix, Westwood, in Duncan, Exot. Moths, p. 212 (1841).
   Ametris netricalis, Walker, List Lep. Ins. Brit. Mus. Vol. 16, p. 6 (1858).
2. *M. cordovaria* (Guenée). Mexico.
   Ametris cordovaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 388 (1858).
   Ametris cordovalis, Walker, List Lep. Ins. Brit. Mus. Vol. 16, p. 6 (1858).

99. Genus ALMODES, Guenée

Almodes. Guenée, Spec. Gén. Lép. Vol. 9, p. 389 (1858).
Polysemia, sect. 1 (sect. typ.). Guenée, ibidem, Vol. 10, p. 450 (1858).

Characters. — Face not or scarcely protuberant, but with projecting tuft of scales. Palpus moderate or rather long, second joint rough-scaled, third joint moderate. Tongue developed. Antenna nearly as long as forewing, in ♂ bipectinate nearly to apex with long or moderate pectinations, each surmounted by a long curved bristle and strongly ciliated proximally, in ♀ dentate, with paired bristles. Thorax hairy beneath. Legs long and slender. Femora with short hair. Hindtibia with all spurs, normally placed, the inner median long. Tarsi spinulose. Abdomen not slender. Wing-expanse 29-42 mm. Wings rather narrow, distal margins more or less crenulate, especially in hindwing. Both

wings with tufts of raised scales at the discocellulars, forewing also with scattered raised scales in cell and in submedian area. Forewing with a very small areole (1).

Early stages unknown.

May be regarded as forming a connecting link between *Ametris* and *Ergavia*. With the latter (with which it agrees in the tuft on forewing and in the type of coloration and pattern) it has been a good deal confused, on account of the undue importance given to the ♂ antennal build. The true location of *benesignata* remains for the present a matter of conjecture; see footnote to that species.

Type of the genus : *Almodes terraria*, Guenée (1858).

Geographical distribution of species. — Mexico to Ecuador, ? N. Argentina.

1. *A. terraria*, Guenée. — Florida, W. Indies, ? Mexico.
   Almodes terraria, Guenée, Spec. Gén. Lép. Vol. 9, p. 390 (1858).
   ? *Polysemia stellidaria*, Guenée, ibidem, Vol. 10, p. 450 (1858) (ead. ac *squamigera*, Felder ?).
   Almodes rivularia, Grote, Papilio, Vol. 3, p. 79 (1883).
   Cleora subaustralis, Hulst, The Canad. Ent. Vol. 30, p. 194 (1898).
   Cleora pedicellata, Hulst, ibidem, p. 194 (1898).
2. *A. squamigera* (Felder) (præc. var. ?). — Mexico to Ecuador.
   Boarmia ? (*Deileptenia*) *squamigera*, Felder, Reise Novara, Lep. Het. t. 126, f. 2 (1875).
   Ergavia assecoma, Druce, Biol Centr. Amer. Lep. Het. Vol. 2, p. 79, t. 48, f. 24, 25 (1892).
3. *A. calvina* (Druce) (*terraria* var. ?). — Mexico.
   Ergavia calvina, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 79, t. 48, f. 21 (1892).
   Almodes terraria (part.), Warren, Novit. Zool. Vol. 1, p. 376 (1894).
4. *A. caletra* (Druce). — Mexico.
   Ergavia caletra, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 79, t. 48, f. 23 (1892).
5. *A. benesignata*, Dognin (huj. gen. ?) (2). — N. Argentina.
   Almodes benesignata, Dognin, Ann. Soc. Ent. Belg. Vol. 50, p. 106 (1906).

100. Genus ERGAVIA, Walker

Ergavia. Walker, List Lep. Ins. Brit. Mus. Vol. 35, p. 1598 (1866).
Polysemia. Warren, Novit. Zool. Vol. 1, p. 376 (1894) (ex Guenée, Spec. Gén. Lép., nec sect. typ.).

Characters. — Face strongly protuberant below. Palpus moderate, stout, second joint rough-scaled, third joint minute. Tongue strong. Antenna long, sometimes nearly as long as the forewing, in ♂ shortly bipectinate or dentate, each tooth surmounted with a single bristle, and with fascicle of cilia, occasionally (*subrufa*) with long pectinations approaching those of *Almodes*, in ♀ dentate with paired bristles. Thorax hairy beneath. Legs long. Femora hairy. Hindtibia in ♂ slightly thickened, in both sexes with armature irregular, and probably sometimes variable (3), the ♂ having only one (long)

(1) We have not observed any instance in which this is wanting, but see *Ergavia*.

(2) Frons normal, as in *terraria*, antennal pectinations one-half the length of those of *terraria*, rather thick for their first two-thirds, their terminal third consisting of the usual single bristle. Hindlegs unfortunately lost, generic position therefore uncertain. Seems intermediate between *Almodes* and *Ergavia* (Dognin, in litt.).

(3) Dr. Dyar writes us that in the type (♀) of *divecta*, ex coll. W. Schaus, one hindtibia has four spurs crowded together, the other three only with no sign of being broken. We have not noticed variability in the very slender material we have been able to examine in the genus.

spur (*carinenta*, *subrufa*, *brunnea*) or two unequal spurs (*merops*, *stigmaria*, *divecta*, etc.), the ♀ two unequal (*obliterata*), three unequal, crowded together (*drucei*, *illineata*, etc. [**Fig. 17**]) or four crowded together (*liraria*, *merops*, *divecta*, etc.). Tarsi strongly spinulose. Abdomen moderately robust. Wing-expanse 33-49 mm. Forewing, often also hindwing, with a tuft of raised scales at the discocellulars, forewing also tufted along median nervure near base. Forewing with SC^{1-5} on a common stalk from near apex of cell, or occasionally (*liraria*) from a very small areole (i. e., SC^1 anastomosing strongly with stalk of SC^{2-5}), M^1 approximated to or connate with R^3; hindwing with DC^3 very oblique, C approximated to SC to middle of cell, or very rarely near base only, SC^2 stalked with R^1; M^1 usually approximated to or connate with R^3 (stalked in *roseivena*, *biangulata*, ? etc.).

FIG. 17

Hindleg of *Ergavia drucei*, Schaus, ♀.

Early stages unknown.

In addition to the characters brought out above, the moths of this genus are mostly broader winged than those of *Almodes*. The present genus has frequently been called *Polysemia*, according to Warren's restriction (*Novit. Zool.* Vol. 1, p. 377) of Guenée's genus of that name; but as Guenée drew up his diagnosis of *Polysemia* from his group I (type, *stellidaria*, Guenée) it is absolutely unavoidable to revert to Walker's name of *Ergavia* for group II (type, *liraria*, Guenée).

Type of the genus: *Ergavia carinenta* (Cramer) = *Phalaena Geometra carinenta*, Cramer = *Ergavia bogotaria*, Walker (1866).

Geographical distribution of species. — Jamaica and Panama to Paraguay.

SECTION I. — ♂ antenna dentate, with fascicles of cilia.

Subsection 1. — ♂ *hindtibia with one spur.*

1. *E. carinenta* (Cramer). — Panama to Guiana.
   Phalaena Geometra carinenta, Cramer, Pap. Exot. Vol. 2, p. 47, 148, t. 128, f. F (1777).
   Phalaena carinenta, Fabricius, Spec. Ins. Vol. 2, p. 255 (1781).
   Phalaena carinata, Fabricius, Mant. Ins. Vol. 2, p. 198 (1787).
   Dryocoetis carinentaria, Hübner, Verz. bek. Schmett. p. 316 (1826?).
   Boarmia carinentaria, Guenée, Spec. Gén. Lép. Vol. 9, p. 240 (1858).
   Boarmia carinenta, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 370 (1860).
   Ergavia bogotaria, Walker, ibidem, Vol. 35, p. 1599 (1866).
   Almodes repleta, Walker, Char. Undescr. Lep. Vol. 3 (1869) (nov. syn.).
2. *E. liraria* (Guenée) (præc. var.?). — ?Brazil to Paraguay.
   Polysemia liraria, Guenée, Spec. Gén. Lép. Vol. 10, p. 451 (1858).
3. *E. merops* (Cramer). — Panama, Guiana, Amazons.
   Phalaena Geometra merops, Cramer, Pap. Exot. Vol. 1, p. 26, 153, t. 18, f. C (1775).
   Phalaena merops, Verloren, Ins. Lep. Crameri. p. 21 (1837).
   Boarmia meroparia, Guenée, Spec. Gén. Lép. Vol. 9, p. 239 (1858).
   Boarmia merops, Felder, Reise Novara, Lep. Het. t. 125, f. 11 (1875).
4. *E. brunnea* (Schaus). — Peru.
   Polysema brunnea, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 276 (1901).

Subsection 2. — ♂ *hindtibia with two spurs.*

5. *E. divecta* (Warren). — French Guiana, ?Venezuela
   Polysemia divecta, Warren, Proc. U. S. Nat. Mus. Vol. 34, p. 91 (1908).

6. **E. roseivena, nov. sp.** (1), Prout. Bolivia.
? *Polysemia calvina*, Warren, Proc. U. S. Nat. Mus. Vol. 34, p. 92 (1908) (nec Druce).

7. **E. biangulata, nov. sp.** (2), Prout (præc. var.?). British Guiana to Venezuela.

SECTION II. — ♂ antenna with short or moderate pectinations, surmounted with cilia; ♂ hindtibia (3) with two spurs.

8. *E. stigmaria* (Walker). Amazons.
Boarmia stigmaria, Walker, List Lep. Ins. Brit. Mus. Vol. 21, p. 363 (1860).
Almodes stigmaria, Butler, Trans. Ent. Soc. Lond. p. 327 (1881).

9. *E. obliterata*, Schaus. Peru.
Ergavia obliterata, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 275 (1901).

10. *E. drucei*, Schaus. Mexico to Trinidad.
Ergavia calvina, ♀, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 79, t. 48, f. 22 (1892) (nec ♂).
Ergavia drucei, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 275 (1901).

11. *E. illineata* (Warren) (præc. var.?; an syn.?) (4). French Guiana.
Polysemia illineata, Warren, Proc. U. S. Nat. Mus. Vol. 34, p. 92 (1908).

SECTION III. — ♂ antenna with long pectinations; ♂ hindtibia with one spur.

12. *E. subrufa* (Warren). Jamaica.
Almodes subrufa, Warren, Novit. Zool. Vol. 4, p. 417 (1897).

3. TRIBUS HEDYLICÆ

Hedylidæ. Guenée, Spec. Gén. Lép. Vol. 10, p. 521 (1858).
Eumeleinæ (part.). Warren, Novit. Zool. Vol. 1, p. 375 (1894) (nec sect. typ.).

Another small but exceedingly natural tribe, highly specialized in several particulars, and perhaps of full subfamily rank.

General characters. — Palpus usually slender. Antenna rather short. Legs usually short, especially the hindleg, foreleg generally weak, with foretarsus somewhat hairy (an exceptional feature

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(1) **Ergavia roseivena, nov. sp.** — ♂, 40-41 mm. Superficially resembling *drucei*, Schaus, though differing in the ♂ antenna. Distal margin of forewing perhaps slightly more oblique, that of hindwing without an even appreciable tooth at end of R^2. Basal and discal tufts of forewing blacker, strongly developed. Lines on forewing perhaps sharper, first line rather nearer base, second line following the same general course as in *drucei*, but more sharply angled, forming an acute angle at R^1 and a second between R^3 and M^1, a deep sinus between them, a slight tooth below M^1 and a moderate angle on submedian fold. Marginal area almost without the dark blotches at costa, behind cell and near tornus. Hindwing with the discal tuft much reduced, scarcely darkened, second line nearly as in *drucei*, but with the angulations at R^1 and between R^3 and M^2 all somewhat produced, on the other hand without an angle at SC^2. Underside somewhat fleshy-tinted, less freckled with grey than in *drucei*, the submarginal dark grey clouding of forewing less interrupted from costa to R^3, the postmedial line obsolete on both wings, the dark discal mark of hindwing almost entirely wanting. Type and two other ♂♂, Charuplaya, Bolivia, and one ♂ San Ernesto, Bolivia, in coll. L. B. Prout. We suspect this is the « *Polysemia calvina* » of Warren, *Proc. U. S. Nat. Mus.* Vol. 34, p. 92 (nec Druce), at least in part, and Warren's *illineata* (ibid.) perhaps the true *drucei*; for most of the very differences which Warren indicates in erecting *illineata* are those which distinguish *drucei* from *roseivena*. Only in the last-named the tufts of forewing are blackish, not « green and pink », while we do not find the lines in true *drucei* so indistinct as suggested by Warren's description of *illineata*.

(2) **Ergavia biangulata, nov. sp.** — ♂ ♀, 34 mm. Closely related to the preceding, of which it may perhaps be a local form, or subspecies. Irrespective of its smaller size, the forewing appears slightly broader (distal margin less oblique), more exactly the shape of *drucei* than in *roseivena*. The coloration is also more that of *drucei*, the veins less rosy-reddish. Lines nearly as in *roseivena*, perhaps less sharply black, postmedial of forewing with the tooth below M^1 scarcely appreciable, that of hindwing with the teeth between R^3 and M^2 very weak. Discal tuft of hindwing somewhat better developed. Underside of hindwing with more marginal dark-grey clouding, especially in costal half. Apart from small size and acute angles in second line of forewing, differs structurally from *drucei* in the antennæ of both sexes; those of the ♀ in *drucei* are dentate, in *biangulata* nearly simple (minutely ciliated, with paired bristles). Type ♂, British Guiana (J. Rodney) in coll. Br. Mus.; co-type (♀) Palma Sola, Venezuela, in coll. L. B. Prout. This species (or subspecies) is probably near *divecta*, Warren, which we have not been able to compare; but in that species (which, moreover, is larger) the postmedial line of hindwing is nearly straight from R^1 to inner margin, in *biangulata* it is angled again beyond R^3 (a strong sinus between the two angles) and thence somewhat dentate.

(3) So far as we are aware, the ♂ of *illineata* is unknown, and we have not been able to examine a ♂ *drucei* with the legs unbroken, but we believe they will be found to be two-spurred.

(4) ♂ unknown, hence possibly not referable to Section II.

in the *Geometridae*). Tibiæ short, terminating in tufts of somewhat projecting scales, hindtibia rarely fully spurred. Abdomen slender, constricted anteriorly, then with dorsum arched, tapering again at anus, and altogether reminding in form of that of *Rhopalocera*, especially certain *Pierinae* (1). Wings thinly scaled. Forewing beneath with a tuft of long, curved hair-like scales at base, ♂ retinaculum very strong and compact. Discocellulars usually oblique *inwards*. Forewing with all veins present, anastomosis of subcostals extremely rare, SC^1 from about one-half of cell, SC^2 free, curved, SC^3 from cell or base of stalk of SC^{4-5}, bicurved, M^1 separate from R^3. Hindwing with all veins present, C separate from SC, remote except in the narrow-winged *Hedyle*, usually connected by a bar near base, as in Group III of the *Œnochromicae*, R^2 well developed (2), SM^3 well developed, running to anal angle, which is usually rounded off.

KEY TO THE GENERA

1. *Hindwing with* C *approximated to* SC *near base* . . . . . 101. Genus HEDYLE, Guenée.
   Hindwing with C *remote from* SC. . . . . 2.
2. *Legs (at least in part) exceptionally long-haired* . . . . . 102. Genus LASIOPATES, Warren.
   Legs not exceptionally long-haired (3) . . . . . 3.
3. *Hindtibia with two pairs of spurs; ♂ foreleg abnormally long* . . . 103. Genus MACROSOMA, Hübner.
   Hindtibia with one pair of spurs; ♂ foreleg not abnormally long . . . . . 4.
4. *Forewing usually excised below apex, or both wings elongate; ♂ antenna not pectinate* . . . . . 104. Genus PHELLINODES, Guenée.
   Forewing neither excised nor elongate; ♂ antenna pectinate. . . . 105. Genus VENODES, Guenée.

101. GENUS HEDYLE, GUENÉE

Hedyle. Guenée, Spec. Gén. Lép. Vol. 10, p. 521 (1858).

Characters. — Face narrow, slightly protuberant, with small tuft of scales. Palpus moderate, slender, second joint rather rough-scaled, third joint moderate, smoother-scaled. Tongue developed. Antenna shortly bipectinate in both sexes, the pectinations slender, with rather sparse, longish cilia on their distal side. Thorax hairy beneath. Foreleg rather weak, femur hairy, tibia with a pencil of very long, lax hairs, tarsus short; hindtibia somewhat swollen posteriorly, with two short spurs, hindtarsus in ♂ with the first joint triangularly swollen (**Fig. 18**). Wing-expanse 32-40 mm. Wings narrow, apex of forewing acute, tornus of hindwing rounded off. Forewing with SC^{1-3} rather closely approximated; hindwing with C closely approximated to SC to nearly one-half of cell, thence gradually diverging. SC^2 connate with R^1.

FIG. 18

Hindleg of *Hedyle h liconiaria* Guenée, ♂.

Early stages unknown.

Type of the genus : *Hedyle heliconiaria*, Guenée (1858).

Geographical distribution of species. — Tropical American.

1. *H. heliconiaria*, Guenée. — Central America to Peru and Guianas.
   Hedyle heliconiaria, Guenée, Spec. Gén. des Lép. Vol. 10, p. 522 (1858).
   Hedyle heliconaria, Walker, List Lep. Ins. Brit. Mus. Vol. 25, p. 1463 (1862).

(1) Compare the names *leptosiata*, *leucophasiata*, *napiaria*, etc., which have not inappropriately been applied to some of the species.
(2) Guenée is in error in saying of *Hedyle* that R^2 is replaced by a fold.
(3) A pencil of long hairs accompanying the foretibial claw is of course not regarded as exceptional.

102. Genus LASIOPATES, Warren

Lasiopates. Warren, Novit. Zool. Vol. 12, p. 310 (1905).

Characters. — Face rounded prominent. Palpus moderate, second joint rough-scaled (strongly hairy in ♂), third joint moderate, distinct. Tongue developed. Antenna stout, in ♂ subserrate, with fascicles of cilia, in ♂ pubescent and with short paired bristles. Thorax stronger than in some of the allied genera, very hairy beneath. Legs more or less shaggily hairy. Abdomen long. Wings narrow, iridescent. Wing-expanse 54-56 mm. Forewing with distal margin vertical to below R^1 (or somewhat excised), thence strongly oblique, inner margin in ♂ with a large rounded lobe at base; hindwing with distal margin slightly sinuate, not convex from tornus to M^1, C remote from SC, the interspace near base in ♂ apparently vitreous, but so concealed by long hair as to make examination difficult, ♂ venation distorted, the cell vitreous basally, M swollen beneath with a conspicuous button-like excrescence, SC^2 from well before apex of cell, ♀ venation normal.

Early stages unknown.

Type of the genus : *Lasiopates hyacinthina*, Warren (1905).

Geographical distribution of species. — Honduras to N. W. Ecuador.

1. *L. hyacinthina*, Warren. Honduras, N. W. Ecuador.
Lasiopates hyacinthina, Warren, Novit. Zool. Vol. 12, p. 311 (1905).

103. Genus MACROSOMA, Hübner

Macrosoma. Hübner (Zutr. Vol. 1, p. 10, indescr.), Verz. bek. Schmett. p. 337 (1826?) (1).
Macrophila. Walker, List Lep. Ins. Brit. Mus. Vol. 25, p. 1465 (1862).

Characters. — Face with a strong beak-like projection of close scales. Palpus rather long, slender, second joint with appressed scales, third joint distinct, long. Tongue developed. Antenna in ♂ very shortly ciliated, in ♀ pubescent and with very short paired bristles. Thorax hairy beneath. Legs slender. Forecoxa and forefemur of ♂ attenuated and enormously elongate (combined length 20 mm.), smooth-scaled, of ♀ normal, hairy. Foretibia short, foretarsus of ♂ long and slender (9 mm.). Hindtibia in both sexes with four short spurs. Hindtarsus spinulose. Abdomen rather long. Wing-expanse 43-56 mm. Forewing elongate, costa gently arched distally, apex acute, distal margin sinuate below apex, cell over one-half, venation normal, undersurface in ♀ between C and SC with a large pocket near base formed by a membranous excrescence from C; hindwing rather narrow, distal margin strongly convex in middle, very gently waved, anal angle rounded off, C well apart from SC, in ♂ with a vitreous patch between them basally, cell near base contorted in ♂, SC and M curving apart, the space between them here concave from underside, with a bar-like excrescence near base and a knob at end of the concavity, venation in ♀ normal.

Early stages unknown.

Type of the genus : *Macrosoma tipulata*, Hübner (1826?).

Geographical distribution of species. — Tropical American.

1. *M. tipulata*, Hübner. Panama to N. Brazil.
Macrosoma tipulata, Hübner, Zutr. Exot. Schmett. Vol. 1, p. 10, f. 21, 22 (1818?).
Macrophila tipulata, Walker, List Lep. Ins. Brit. Mus. Vol. 25, p. 1466 (1862).

(1) *Macrosoma* Leach, in *Bowdich's Mission to Ashantee*, p. 493 (1819) is « gen. indescr. » equally with *Macrosoma*, Hübner, *Zutr.* (1818?), and the two would be accepted or rejected together. *Macrophila*, Walker, is therefore superfluous.

104. Genus PHELLINODES, Guenée

Phellinodes. Guenée, Spec. Gén. Lép. Vol. 10, p. 523 (1858).
Hyphedyle. Warren, Novit. Zool. Vol. 1, p. 375 (1894) (nov. syn.).

Characters. — Face with projecting tuft of scales. Palpus rather long to moderate, second joint rough-scaled, third joint long or moderate, cylindrical, obtuse, smooth-scaled. Tongue developed. Antenna rather short, in ♂ with joints thickened, pubescent and with short or moderate ciliation (long in *subornata*), in ♀ almost simple, finely pubescent (ciliated in *subornata*) and with fine minute paired bristles. Thorax hairy beneath. Foreleg rather short and weak. Femora and foretibia more or less fringed or tufted with hair. Hindtibia with small terminal spurs. Tarsi with slender spinules (**Fig. 19**). Wing-expanse 30-58 mm. Forewing with apex acute, usually produced, distal margin usually subconcave below apex and somewhat elbowed below R^3, SC^3 very occasionally anastomosing at a point with SC^4, usually free (as is normal in this tribe); hindwing with distal margin rounded, angles moderately rounded, a slender connective bar between C and SC near base, venation in ♂ (**Pl. 2, Fig. 16**) often distorted, M throwing a bend upward into cell, the cell here somewhat puckered, containing a glassy, fovea-like patch (its concavity beneath), in some species (*hedylaria, obstructa,* etc.) with a button-like swelling costad to M (likewise beneath), venation in ♀ normal.

Fig. 19

Hindleg of *Phellinodes uniformis*, Warren, ♂.

Early stages unknown.

There is some minor variation in the palpi, etc., within the limits of this genus, but we have failed to find definite characters — other than the ♂ venation — for separating *Hyphedyle* from *Phellinodes;* on the whole the species with simple venation (*Hyphedyle*) seem more slenderly built, with more slender palpus, its terminal joint shorter, and with slight differences in the antennal ciliation and possibly in the frontal tuft.

Type of the genus : *Phellinodes satellitiata,* Guenée (1858).

Geographical distribution of species. — Neotropical.

Section I. — ♂ with hindwing venation distorted (*Phellinodes,* Guenée).

1. *P. satellitiata,* Guenée. — Brazil, ? Central America.
   Phellinodes satellitiata, Guenée, Spec. Gén. Lép. Vol. 10, p. 523, t. 21, f. 8 (1858).
2. *P. uniformis,* Warren (præc. var. ?). — **Pl. 1, Fig. 5.** — Ecuador, Peru, ? Central America.
   Phellinodes uniformis, Warren, Novit. Zool. Vol. 11, p. 14 (1904).
3. *P. lucivittata* (Walker). — Ecuador to Amazons.
   Hedyle lucivittata, ♀, Walker, List Lep. Ins. Brit. Mus. Vol. 26, p. 1745 (1862).
   Phellinodes absentimacula, ♂, Warren, Novit. Zool. Vol. 11, p. 499 (1904) (nov. syn.).
4. *P. leptosiata* (Felder). — French Guiana.
   Hedyle leptosiata, Felder, Reise Novara, Lep. Het. t. 133, f. 33 (1875).
5. *P. muscerdata,* Felder. — Amazons.
   Phellinodes muscerdata, Felder, Reise Novara, Lep. Het. t. 133, f. 34 (1875).
6. *P. hedylaria,* Warren. — « S. America », ? N. Brazil.
   Phellinodes hedylaria, Warren, Novit. Zool. Vol. 1, p. 376 (1894).
7. *P. conifera,* Warren. — Surinam, Amazons.
   Phellinodes conifera, Warren, Novit. Zool. Vol. 4, p. 417 (1897).

8. *P. nigrimacula*, Warren. — Bolivia.
Phellinodes nigrimacula, Warren, Novit. Zool. Vol. 4, p. 418 (1897).
9. *P. interrupta*, Warren (huj. sect. ?). — Ecuador.
Phellinodes interrupta, Warren, Novit. Zool. Vol. 11, p. 14 (1904).
10. *P. obstructa*, Warren. — Ecuador.
Phellinodes obstructa, Warren, Novit. Zool. Vol. 11, p. 14 (1904).
11. *P. albifascia* Warren. — Peru.
Phellinodes albifascia, Warren, Novit. Zool. Vol. 11, p. 499 (1904).
12. *P. megalophysa* Warren. — French Guiana.
Phellinodes megalophysa, Warren, Proc. U. S. Nat. Mus. Vol. 34, p. 95 (1908).

SECTION II. — ♂ with hindwing venation not distorted *(Hyphedyle*, Warren).

13. *P. ustrinaria* (Herrich-Schäffer). — Panama, Guianas, Peru.
Acidalia (?) *ustrinaria*, Herrich-Schäffer, Samml. Aussereur. Schmett. Vol. 1, t. 40, f. 196 (1854).
Macrosoma ustrinaria, Herrich-Schäffer, ibidem, p. 36 (1856).
Macrophila (?) *ustrinaria*, Walker, List Lep. Ins. Brit. Mus. Vol. 25, p. 1466 (1862).
Phellinodes ustrinaria, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 178 (1893).
14. *P. rubedinaria* (Walker). — Mexico, Central America, Trinidad.
Hedyle rubedinaria, Walker, List Lep. Ins. Brit. Mus. Vol. 25, p. 1464 (1862).
Phellinodes rubedinaria, Druce, Biol. Centr. Amer. Lep. Het. Vol. 2, p. 278, t. 58, f. 9 (1893).
Hyphedyle rubedinaria, Warren, Novit. Zool. Vol. 1, p. 375 (1894).
15. *P. bahiata* Felder. — Bahia to Ecuador and Peru.
Phellinodes bahiata, Felder, Reise Novara, Lep. Het., t. 133, f. 35 (1875).
Phellinodes coscoja, Dognin, Ann. Soc. Ent. Belg. Vol. 44, p. 214 (1900) (var. ?).
16. *P. albimacula* (Warren). — Ecuador.
Hyphedyle albimacula, Warren, Novit. Zool. Vol. 7, p. 124 (1900).
17. *P. cascaria* (Schaus). — Mexico to Venezuela.
Hyphedyle cascaria, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 275 (1901).
18. *P. paularia* (Schaus). — S. E. Brazil.
Hyphedyle paularia, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 275 (1901).
19. *P. albida* (Schaus). — Rio Janeiro.
Hyphedyle albida, Schaus, Trans. Amer. Ent. Soc. Vol. 27, p. 275 (1901).
20. *P. leucophasiata*, Thierry-Mieg. — Ecuador to Peru.
Phellinodes leucophasiata, Thierry-Mieg, Le Naturaliste, Vol. 26, p. 182 (1904).
Hyphedyle divisa, Warren, Novit. Zool. Vol. 12, p. 43 (1905) nov. syn.).
21. *P. subornata* (Warren). — Peru to West Colombia.
Hyphedyle subornata, Warren, Novit. Zool. Vol. 11, p. 499 (1904)

105. GENUS VENODES, GUENÉE

Venodes. Guenée, Spec. Gén. Lép. Vol. 10, p. 522 (1858).

Characters. — Face rather prominent, with projecting tuft of scales. Palpus moderate, porrect, second joint moderately rough-scaled, third joint distinct. Tongue present. Antenna in ♂ bipectinate with moderate pectinations which bear rather sparse, longish cilia on both sides and terminally, in ♀ minutely ciliated, with short paired bristles. Thorax hairy beneath. Legs short. Femora hairy. Tibiæ rather short, more or less hairy. Hindtibia strongly hairy, with short, rather weak terminal spurs. Wing-expanse 31-36 mm. Wings thinly scaled. Forewing with costa rather straight, distal margin entire in ♂, very faintly sinuate below apex in ♀, SC^3 usually (always?) arising from cell separately

from stalk of SC^{4+5}, M^1 more remote from R^3 than in *Phellinodes;* hindwing with C remote from SC, connected by a slender bar near base, venation simple in both sexes, M^1 further from R^3 than in *Phellinodes*.

Early stages unknown.

This genus might almost be treated as yet another section of the preceding. As, however, the general aspect suggests that there is really a wider divergence than is indicated by the characters which have hitherto been studied, it seems best to keep it distinct.

Type of the genus : *Venodes napiaria,* Guenée (1858).

Geographical distribution of species. — Brazil.

1. *V. napiaria,* Guenée. Brazil.
Venodes napiaria, Guenée, Spec. Gén. Lép. Vol. 10, p. 522, t. 20, f. 7 (1858).

SPECIES INCERTÆ SEDIS

Arrhodia fenestrata, Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 145 (1900) (huj. subfam.?). Brisbane.

Arrhodia (?) *illedgei*, Lucas, Proc. Linn. Soc. N. S. Wales (2), Vol. 8, p. 139 (1894) (huj. subfam.?). Brisbane.

Aspidoptera [Lucas, 1900, nec Coquillet, 1899] = *Tetraspidoptera* [Speiser, 1902] *ambiens,* Lucas, Proc. Roy. Soc. Queensl. Vol. 15, p. 147 (1900) (huj. subfam.?). Brisbane.

Aspilates [Meyrick, 1890, nec Treitschke] *chordota,* Meyrick, Proc. Linn. Soc. N. S. Wales (2), Vol. 4, p. 1196 (1890) (huj. subfam.?). Melbourne.

Hypographa reflua, Lucas, Proc. Roy. Soc. Queensl. Vol. 13, p. 70 (1898) (huj. subfam.?). Brisbane.

Monoctenia turneri, Lucas, ibidem, Vol. 8, p. 82 (1892). Brisbane.

Möschleria [Saalmüller, 1891] *hulstii,* Möschler, Abhandl. Senckenb. Ges. Frankf. Vol. 16, p. 253 (1891) (huj. subfam.?). Porto Rico.

Onychodes euchrysa, Lower, Trans. Roy. Soc. S. Austral. Vol. 18, p. 82 (1894). Cairns, Queensland.

Onychodes fulguraus, Lucas, Proc. Roy. Soc. Queensl. Vol. 13, p. 70 (1898) (huj. subfam.?). Mackay, Queensland.

Ozola (?) *bicolorata*, Semper, Iris. Vol. 18, p. 266 (1906) (huj. subfam.?). Caroline Islands.

* * *

Many doubts and uncertainties still hang over the classification of this little-understood and little-studied subfamily, and many « species incertæ sedis » will be found in the above pages ranged under the genera to which they are believed to belong; where there has been no examination made of the species, either personally or by some competent authority, the uncertainty is expressed (« huj. gen.? », « huj. sect.? », « hic ponenda? »). We cannot conclude without returning thanks to the many who have rendered valued service in the solving of many difficulties, especially to Mr. William Warren, M. A. — whose constant help we have already acknowledged in our Introduction to the family, — Dr. Harrison G. Dyar of New York, Dr. A. Jefferis Turner of Brisbane and Mr. Edward Meyrick, B. A., for miscellaneous help, advice and information; Mr. G. Lyell of Gisborne, for the gift and loan of a very large amount of valuable material, without which a satisfactory working-out of the Australian genera would have been impraticable; Mr. G. V. Hudson of Wellington, N. Z., for a

generous contribution of New Zealand species; Sir George F. Hampson, Bart., Prof. Edward B. Poulton, M. A., F. R, S., etc., and Dr. Karl Jordan, for every facility afforded for the study of the collections under their control; Dr. M. Bastelberger, Herbert Druce, Esq., and M. Paul Dognin, for assistance regarding the types in their rich collections; Dr. T. A. Chapman, and Rev. C. R. N. Burrows, for placing at our disposal the results of their investigations of the genital armature of many species; also to numerous others whose assistance, though (through force of circumstances) it may have been less prominent, has been no less readily given.

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London, N. E., Dalston, April 15. 1910.

HYMENOPTERA

FAM. THYNNIDÆ

HYMENOPTERA

FAM. THYNNIDÆ

by Rowland E. TURNER

WITH 2 COLOURED AND 2 PLAIN PLATES

INTRODUCTION

It is with some hesitation that I have put into definite form the result of my study of the classification of the Thynnidæ, being fully conscious of the insufficiency of the material available for a thoroughly satisfactory work on the family. It will very likely be said that I have attempted too minute a classification for the present state of our knowledge, but I have found that it is almost impossible to define larger genera with anything like sufficient accuracy, and I consider that in the future the tendency will be towards the creation of more genera rather than towards sinking those already proposed.

The family *Thynnidae* was first definitely formed by Erichson in 1842 for the Fabrician genus *Thynnus*. Previously Latreille had in 1809 founded the genus *Myrmecodes*, which he classed among the *Mutillidae*, for the females of the family. In 1810 Klug founded the genus *Scotaena* for the male of a Brazilian species. Westwood in 1835 founded the genera *Anodontyra* and *Diamma*, the male of the latter being shortly afterwards described by Shuckard under the generic name *Psammatha* and by Guérin under *Tachypterus*. The first work in which the family is dealt with in any detail is Guérin's monograph in the *Voyage de la Coquille*, published apparently in 1839, though the date on the title-page is 1830. In it he founded the genera *Elaphroptera*, *Ornepetes*, *Telephoromyia*, *Ammodromus*, *Thynnoides* and *Rhagigaster*, all of which I retain, also *Anthobosca*, which I have removed to the *Scoliidae*. Three or four years later (1842) he added the genera *Catocheilus*, *Lophocheilus* and *Tachynomyia*. All these genera, though originally founded on one sex alone (with the exception of *Catocheilus*), may be regarded as valid, being carefully characterized and illustrated by good dissections. In 1841 Shuckard published a description of the genus *Oncorhinus* and Westwood one of *Amblysoma*.

In 1842 appeared Erichson's description of *Ariphron*, and also an important monograph by Klug in which he founded the genus *Ælurus*, but sank all Guérin's genera. Westwood in 1844 founded the genera *Enteles* and *Eirone*, and added much to the knowledge of the sexes, illustrating his work with careful dissections. Although much had been done during the years 1835-1844, scarcely any additions were made to the genera in the family for nearly sixty years. Saussure in 1867 described the genus *Zeleboria;* but Westwood's genus *Iswara* (1851) does not belong to the family, and the work of Smith, though bulky, was confined to the description of new species. In 1899 and 1903 Ashmead attempted a detailed classification of the family and founded the genera *Spilothynnus*, *Pseudelaphroptera*, *Iswaroides*, *Zaspilothynnus*, *Hemithynnus*, *Æolothynnus* and *Psammothynnus*, which I retain; and also *Klugianus*, *Pycnothynnus*, *Cephalothynnus*, *Thynnidea*, *Guerinius* and *Pseudaelurus*, which I reject; *Glyptometopa* I retain in the family with strong doubt. I also omit Ashmead's subfamily *Methocinae*, which is placed by many authors with the *Mutillidae* and might well be treated as a separate family. In 1907-1908 I published a revision of the family, forming the genus *Rhytidogaster* which I sink in the present work, also the subgenera *Phymatothynnus*, *Glaphyrothynnus* and *Macrothynnus* which I raise to generic rank, and *Lepteirone* which I sink.

Ashmead's classification is based on the form of the pygidium, the sculpture of the second abdominal segment and the shape of the head in the female, and on the clypeus and hypopygium of the male. These points are of considerable importance, with the exception of the shape of the head in the female, which is often only of specific value; but if followed too rigidly they lead to much error and unnecessary subdivision. On the other hand a division based on the mouth parts is too inconvenient, though more reliable, and must lead to much uncertainty owing to the small number of species available or dissection. In the present classification, though I have made much use of the mouth parts, I have avoided using them in the key to the genera.

Some species which I have assigned provisionally to various genera will doubtless have to be placed elsewhere, and do not always possess all the generic characters; but I have thought it best to place them with what appear to me to be their nearest allies, rather than place them in a long list at the end which would afford no clue to their position, or found new genera for them on very insufficient material.

FAM. THYNNIDÆ

Thynnidæ. Erichson, Arch. f. Naturg. 1841, Vol. 8 (1842).

Characters. — *Female.* — Apterous; antennæ scarcely longer than the head, curved, the scape hollowed at the apex and almost concealing the first joint of the flagellum. Thorax divided into three parts, including the median segment, more or less contracted in the middle. Femora compressed; posterior coxæ contiguous; the intermediate coxæ nearly always separated by a bilobed projection of the mesosternum.

Eyes small, entire; ocelli nearly always absent.

Male. — Eyes entire; the intermediate coxæ separated by a bilobed projection of the mesosternum, intermediate tibiæ with two apical spines. Three cubital calls, the first usually more or less completely divided by a spur from the first transverse cubital nervure; two recurrent nervures; the radial cell never appendiculate. The cubital nervure of the hind wing originates before the apex of the submedial cell. Hypopygium usually abnormal.

TABLE OF THE SUBFAMILIES

Female :

1. *Ocelli present; mandibles quadridentate; first abdominal segment strangulated at the apex* . . . . . 1. Subfam. DIAMMINÆ, Turner.
Ocelli absent; mandibles never more than bidentate; first abdominal segment not strangulated . . . . . 2.
2. *Mesopleurae showing a distinct dorsal surface; maxillary palpi never less than four-jointed; mandibles sometimes bidentate.* . 2. Subfam. RHAGIGASTERINÆ, Ashmead.
Mesopleurae never showing a dorsal surface; maxillary palpi variable, often rudimentary; mandibles never bidentate. . . 3. Subfam. THYNNINÆ, Ashmead.

Male :

1. *Both recurrent nervures received by the second cubital cell close together; antennae short and very stout; first abdominal segment slightly strangulated at the apex; hypopygium not produced, rounded; mandibles tridentate* . . . . . 1. Subfam. DIAMMINÆ, Turner.
Second and third cubital cells each receiving a recurrent nervure, or very rarely both received far apart by the second cubital cell; antennae slenderer; first abdominal segment not strangulated . . . . . 2.
2. *Second and third cubital cells always each receiving a recurrent nervure; mandibles always bidentate; hypopygium either not at all or very slightly produced and rounded at the apex, unarmed; or else ending in a long, acute, strongly recurved apical spine; claspers with an apical tuft of long hairs curved inwards* . . 2. Subfam. RHAGIGASTERINÆ, Ashmead.
Hypopygium always abnormal, very diverse in form, but never ending in an acute, strongly recurved spine; claspers very rarely with an apical tuft of incurved hairs; mandibles very rarely tridentate; second cubital cell very rarely receiving both recurrent nervures far apart . . . . . 3. Subfam. THYNNINÆ, Ashmead.

I. SUBFAM. DIAMMINÆ, TURNER

Rhagigasterinæ (pars). Ashmead, The Canad. Entom. Vol. 35, p. 157 (1903).
Diamminæ. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 212 (1907).

Characters. — *Female.* — Mandibles quadridentate, the three inner teeth very short. Clypeus carinated; the labrum short, very broadly rounded at the apex; the mouth parts fully developed, as large proportionately as in the male; the labium long and narrow, the labial palpi four-jointed, the basal joint the longest; maxillary palpi six-jointed, the basal joint the shortest; the dividing line of the galea incomplete. Eyes large, elongate oval, touching the base of the mandibles. Ocelli present, but small. Antennæ stout and curved. Head large, broader than long, convex and rounded at the sides. Pronotum narrower than the head, much longer than broad. Scutellum very short and narrowed. Median segment

as long as the pronotum, the spiracle large and distinct. Abdomen as long as the head and thorax, the basal segment strangulated at the apex; the sculpture of the second dorsal and fifth ventral segment not differentiated; the pygidium simple, rounded at the apex. Tibiæ and tarsi spinose, the tarsal ungues bidentate, the legs long. Much larger than the male.

Male. — Clypeus short and not produced, carinated. Mouth parts similar to those of the female, but slenderer, the mandibles tridentate. Antennæ very stout and curved, shorter than the thorax and median segment combined. Abdomen fusiform, slender at the base, the basal segment very slightly strangulated at the apex. Hypopygium produced a little beyond the seventh dorsal segment, rather narrow and rounded at the apex. The two recurrent nervures are received close together by the second cubital cell, the second transverse cubital nervure is very short and the first cubital cell is not divided either by a nervure or a scar. Claspers short and small.

There is only one genus.

1. Genus DIAMMA, Westwood

Diamma. Westwood, Proc. Zool. Soc. Lond. Vol. 3, p. 53 (1835).
Psammatha. Shuckard, Trans. Ent. Soc. Lond. Vol. 2 (1), p. 68 (1837).
Tachypterus. Guérin, in Duperrey, Voy. Coquille, Zool. Vol. 2, p. 213 (1839).
Trachypterus. Dalla Torre, Cat. Hym. Vol. 8, p. 119 (1897) (nec Guérin).

Characters. — The same as in the subfamily.

Geographical distribution of species. — South Eastern Australia and Tasmania. Only one species is known.

1. *D. bicolor,* Westwood, Proc. Zool. Soc. Lond. Vol. 3, p. 53 (1835), ♀. South Eastern, Australia, Tasmania.
— **Pl. 1, Fig. 12, 13, 14; Pl. 3, Fig. 55-56.**
Psammatha chalybea, Shuckard, Trans. Ent. Soc. Lond. Vol. 2 (1), p. 69 (1837), ♂.

2. SUBFAM. RHAGIGASTERINÆ, Ashmead

Rhagigasterinæ. Ashmead, The Canad. Entom. Vol. 35, p. 156 (1903) (pars).

Characters. — *Female.* — Maxillary palpi never less than four-jointed, often six-jointed; ocelli absent. Mesopleuræ showing a distinct dorsal surface on either side of the scutellum.

Male. — Hypopygium ending in a long recurved spine, or simply rounded without a spine; the claspers furnished at the apex with a tuft of long bristle-like hairs, curved inwards. The second recurrent nervure always received by the third cubital cell, the mandibles always bidentate.

The males in which the hypopygium is unarmed and little, if at all, produced, have females with the maxillary palpi four-jointed, with the head always rectangular and the pygidium never contracted, compressed or truncate. The three apical joints of the maxillary palpi in these males are nearly always slender and elongate.

The females of the males in which the hypopygium ends in a long recurved spine usually have the maxillary palpi six-jointed, the head usually rectangular and the pygidium simple, but in the genus

Enteles the head is small and convex and the pygidium truncate. The males in this group never have the maxillary palpi elongate.

The subfamily as defined by Ashmead seems to me rather too comprehensive, and I am obliged to omit several genera included by him.

KEY TO THE GENERA

Female :

1. *Head large, rectangular, almost always longer than broad; second abdominal segment similar in sculpture to the rest; pygidium not truncate or compressed; dorsal area of mesopleurae large* . . . . . 2.
   Head small, subrectangular, much broader than long; second abdominal segment transversely striated; pygidium vertically truncated; dorsal area of mesopleurae small . . . . . 1. Genus DIMORPHOTHYNNUS, Turner.
2. *Intermediate coxae separated by a bilobed production of the mesosternum; maxillary palpi often six-jointed* . . . . . 2. Genus RHAGIGASTER, Guérin.
   Intermediate coxae contiguous; maxillary palpi always four-jointed . . . . . 3.
3. *Epipygium normal, not narrow; median segment without a depression* . . . . . 3. Genus EIRONE, Westwood.
   Median segment with a depression in the middle; epipygium long and narrow . . . . . 4. Genus ÆLURUS, Klug.

Male :

1. *Hypopygium ending in a long, strongly recurved spine; the apical joints of the maxillary palpi not elongate* . . . . . 2.
   Hypopygium unarmed; the apical joints of the maxillary palpi usually elongate . . . . . 3.
2. *Epipygium very broad, truncate or broadly rounded at the apex* . . 1. Genus DIMORPHOTHYNNUS, Turner.
   Epipygium not very broad. . . . . . 2. Genus RHAGIGASTER, Guérin.
3. *Hypopygium not produced beyond the epipygium, broadly rounded at the apex; the clypeus never emarginate or dentate* . . . . . 3. Genus EIRONE, Westwood.
   Hypopygium produced a little beyond the epipygium, sometimes narrowed; the clypeus often emarginate or dentate . . . . . 4. Genus ÆLURUS, Klug.

1. GENUS DIMORPHOTHYNNUS (NOV. NOM.), TURNER

Enteles. Westwood, Arcan. Ent. Vol. 2, p. 143 (1844) (sed nom. præocc.).

Characters. — *Female.* — Mandibles simple; the clypeus produced, usually with a feeble carina. Labium broadened anteriorly, the labial palpi four-jointed; the maxillæ small, the galea rounded at the apex, the dividing line almost obsolete; the maxillary palpi nearly as long as the maxillæ, six-jointed. Head small, more or less convex, not rectangular, no broader than the pronotum, which is much broader than long. Mesopleuræ reaching the level of the scutellum on each side anteriorly, showing a distinct though very small dorsal surface; the median segment almost as long as the pronotum. Abdomen rather broad, not elongate or cylindrical, the first segment with a transverse groove before the apex, the second segment with many transverse carinæ, the third segment finely transversely

striated at the base. Pygidium broad, not contracted at the base, vertically truncate posteriorly, the face of the truncation longitudinally striated and often as broad as long. Fifth ventral segment coarsely sculptured, usually longitudinally striated. Tarsal ungues bidentate.

Male. — Clypeus moderately convex, prominent and carinated at the base; the labrum concealed, narrowed into a short petiole near the base, expanding anteriorly into a crescentic process, which is truncate posteriorly and rounded anteriorly. Labium narrowed at the base, broadened at the apex, the labial palpi four-jointed; maxillary palpi six-jointed, the galea rounded at the apex, the dividing line distinct. Antennæ stout, of even thickness throughout, short, not as long as the thorax and median segment combined; the interantennal prominence broad and elevated; a transverse carina in front of the anterior ocellus. Pronotum rather narrower than the head; the median segment short and abruptly truncated posteriorly. Abdomen elongate, the sides nearly parallel, the segments feebly constricted at the base. Seventh dorsal segment very broad, broadly truncate or rounded at the apex; the hypopygium projecting a little beyond the seventh dorsal segment and ending in a strongly recurved spine with a tooth on the upper surface near the base. The two basal ventral segments are separated by a deep groove, the first usually strongly carinated at the base.

Type of the genus : *D. haemorrhoidalis*, Guérin.

Geographical distribution of species. — Australia.

1. *D. barnardi*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 246 (1907), ♂. — Queensland.
2. *D. conjugatus*, Turner, ibidem, p. 243 (1907), ♂. — Queensland.
3. *D. deceptor*, Smith, Descr. New Spec. Hym. p. 169 (1879), ♂. — North West Australia.
4. *D. dimidiatus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 62 (1859), ♂ ♀. — New South Wales. — **Pl. 3, Fig. 57, 58.**
5. *D. haemorrhoidalis*, Guérin, Mag. Zool. Vol. 12 (1842), ♂. — Southern Australia.
   Enteles bicolor, Westwood, Arcan. Ent. Vol. 2, p. 143 (1844), ♀.
6. *D. integer*, Fabricius, Syst. Ent. p. 360 (1775), ♂. — Eastern Australia.
7. *D. morio*, Westwood, Arcan. Ent. Vol. 2, p. 105 (1844), ♂. — **Pl. 1, Fig. 8-11.** — New South Wales.
   Thynnus serripes, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 44 (1859), ♀.
8. *D. simillimus*, Smith, Trans. Ent. Soc. Lond. (3), Vol. 2 (5), p. 390 (1865), ♂. — Western Australia.
9. *D. testaceipes*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 244 (1907), ♂. — Australia.

2. Genus RHAGIGASTER, Guérin

Rhagigaster. Guérin, in Duperrey, Voy. Coquille, Zool. Vol. 2, p. 213 (1839).
Rhytidogaster. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 229 (1907).

An examination of rather more extensive material than was available to me when writing my Revision of this group has convinced me that it is not advisable to retain the genus *Rhytidogaster;* though the differences in the females are sufficiently marked, the males are not distinguishable with sufficient certainty, so that in the present state of our knowledge it is more convenient to retain them in a single genus

Characters. — *Female.* — Head rectangular, almost always longer than broad, not convex, large and broader than the pronotum. Mandibles bidentate or simple, the labium short and rather broad, the labial palpi four-jointed. Maxillary palpi short, not more than half as long as the maxilla, six-jointed, in some of the smaller species apparently four-jointed. The sides of the thorax are nearly parallel, the

mesopleuræ showing a distinct dorsal surface; the median segment broadened from the base, longer than the pronotum. Abdomen elongate, cylindrical or subcylindrical, longer than the head, thorax and median segment combined. Pygidium never contracted or truncate. The second dorsal segment and fifth ventral segment never different in sculpture to the others. Legs short, the tarsal ungues bidentate; the intermediate coxæ separated by a bilobed projection of the mesosternum as is usual in the family.

Male. — Mandibles bidentate; the clypeus nearly always carinate, either with a ∧-shaped or with a simple longitudinal carina, labrum short, transverse, strongly narrowed posteriorly, much broader than long. Maxillary palpi six-jointed, the basal joint very short, the apical joint the longest. Labium broadened from the base to the apex, the labial palpi four-jointed, the joints of about equal length. Antennæ shorter than the thorax and median segment combined, stout and of almost equal thickness throughout. Abdomen elongate, longer than the head, thorax and median segment combined, the segments more or less depressed at the base, the first ventral segment with a small spine at the base and very deeply separated from the second. Seventh dorsal segment not very broad at the apex; the hypopygium produced into a long, recurved apical spine, sometimes with acute lateral spines. The second recurrent nervure is received near the base of the third cubital cell.

Type of the genus : *R. unicolor*, Guérin.

Geographical distribution of species. — Australia, Tasmania and New Zealand.

1. *R. aculeatus*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 113, (1867), ♂.	New South Wales, Victoria.
st. acutangulus, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 235 (1907), ♂ ♀.	South Australia.
2. *R. alexius*, Turner, ibidem, p. 230 (1907), ♂ ♀.	Cape York, Queensland.
3. *R. analis*, Westwood, Arcan. Ent. Vol. 2, p. 106 (1844); ♀.	Western Australia.
4. *R. approximatus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 219 (1907), ♂ ♀.	North Queensland.
5. *R. auriceps*, Turner, ibidem, p. 220 (1907), ♂ ♀.	North Queensland.
6. *R. bidens*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 112 (1867), ♂.	New South Wales.
R. bidens, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 233 (1907), .	
7. *R. breviusculus*, Turner, ibidem, p. 236 (1907), ♂ ♀.	North Queensland.
8. *R. castaneus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 63 (1859), ♀.	Western Australia.
9. *R. comparatus*, Smith, ibidem, p. 69 (1859), ♂ ♀.	South Australia, Victoria.
10. *R. consanguineus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 240 (1907), ♂ ♀.	South Western Australia.
11. *R. cornutus*, Turner, ibidem, p. 233 (1907), ♂.	South Australia.
12. *R. crassipunctatus*, Turner, ibidem, p. 222 (1907), ♂ ♀.	North Queensland.
13. *R. denticulatus*, Turner, ibidem, p. 232 (1907), ♂ ♀.	North Queensland.
14. *R. discrepans*, Turner, ibidem, Vol. 33, p. 254 (1908), ♂ ♀.	Western Australia.
15. *R. elongatus*, Turner, ibidem, Vol. 32, p. 225 (1907), ♂.	South Queensland.
16. *R. ephippiger*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 235 (1839), ♀.	South Australia.
R. aethiops, Smith, Descr. New Spec. Hym. p. 175 (1879), .	
17. *R. fulvipennis*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 224 (1907), ♂ ♀.	Cape York, Queensland.
18. *R. fuscipennis*, Smith, Descr. New Spec. Hym. p. 175 (1879), ♂.	North Queensland.
R. fuscipennis, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 219 (1907), ♀.	
19. *R. gracilior*, Turner, ibidem, p. 223 (1907), ♂ ♀.	North Queensland.
20. *R. iracundus*, Turner, ibidem, p. 237 (1907), ♂.	Victoria.
21. *R. laevigatus*, Smith, Descr. New Spec. Hym. p. 176 (1879), ♂ ♀. — **Pl. 3, Fig. 59, 60.**	Queensland, North Western Australia.
22. *R. mandibularis*, Westwood, Arcan. Ent. Vol. 2, p. 105 (1844), ♂ ♀.	Victoria, New South Wales.
23. *R. neptunus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 227 (1907), ♂.	Port Darwin.

24. *R. novarae*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 112 (1867), ♂. — New Zealand.
25. *R. obtusus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 62 (1859), ♂. — South Australia.
26. *R. pinguiculus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 238, (1907), ♂. — North Queensland.
27. *R. prothoracius*, Turner, ibidem, p. 239 (1907), ♂ ♀. — North Queensland.
28. *R. pugionatus*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 113 (1867), ♂. — Tasmania, New South Wales.
    R. pugionatus, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 234 (1907), ♀.
29. *R. reflexus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 62 (1859), ♂. — Western Australia.
30. *R. tristis*, Smith, ibidem, p. 63 (1859), ♂. — Western Australia.
31. *R. tumidus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 236 (1907), ♂ ♀. — Western Australia. Victoria, New South Wales.
32. *R. unicolor*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 214 (1839), ♂. — New South Wales. **Pl. I, Fig. 20.**
    R. binotatus, Westwood, Arcan. Ent. Vol. 2, p. 105 (1844), ♀.
33. *R. ? pyxidatus*, Turner, Proc. Linn. Soc N. S. Wales, Vol. 33, p. 255 (1908), ♂. — Western Australia

3. Genus EIRONE, Westwood

Eirone. Westwood, Arcan. Ent. Vol. 2, p. 144 (1844).
Ælurus (pars). Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 249 (1907).
Ælurus, subgenus **Lepteirone.** Turner, ibidem, p. 249 (1907).
Ælurus, subgenus **Eirone.** Turner, ibidem, p. 258 (1907).

Characters. — *Female.* — Mandibles bidentate or simply falcate. Clypeus short, without a carina. Maxillary palpi four-jointed; labial palpi four-jointed. Head rectangular, never broader than long, usually much longer than broad, with a faint, longitudinal, frontal sulcus. Eyes small, almost round, not touching the base of the mandibles. Pronotum narrower than the head, longer than broad, more or less narrowed anteriorly, never carinated or excavated. Mesopleuræ raised, showing a considerable dorsal surface on each side of the scutellum. Median segment as long as or longer than the pronotum, much longer than broad, the sides nearly parallel. Abdomen cylindrical or subcylindrical, as long as or longer than the head, thorax and median segment combined; the sculpture of the second dorsal segment not differentiated; the pygidium simple, not compressed or truncate. Legs short, the intermediate and posterior tibiæ strongly spinose; tarsal ungues simple. The intermediate coxæ are contiguous, the mesosternum not being produced posteriorly.

Male. — Clypeus very variable in form, but always truncate at the apex, never emarginate. Mandibles bidentate. Maxillæ much shorter than the palpi, the division of the galea incomplete and ill defined. Maxillary palpi six-jointed; the three apical joints longer than the others, very variable in length, but often extremely long and slender; the basal joint always very short. Labium short and broad; labial palpi four-jointed, the basal joint long. Labrum transverse and short. Antennæ variable in length. Hypopygium simple, projecting very little beyond the seventh dorsal segment and broadly rounded at the apex, with a fringe of short stiff hairs. Legs rather short, the intermediate coxæ separated as usual in the family. The shape of the third cubital cell is very variable, it is often narrowed on the radial nervure so as to be shorter than the second. The claspers are furnished at the apex with a tuft of long stiff hairs curved inwards.

The males in this genus show considerable variation in the form of the clypeus, maxillary palpi, neuration and antennæ and might be subdivided as suggested in my revision of the family, but as there

do not appear to be corresponding differences in the females, I have thought it better to sink them all in the same genus. It is very near the South American genus *Ælurus*, Klug.

Type of the genus : *E. dispar*, Westwood.

Geographical distribution of species. — Australia.

1. *E. arenaria*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 253 (1907), ♂. — Victoria.
2. *E. caroli*, Turner, ibidem, p. 252 (1907), ♂. — Victoria.
3. *E. castaneiceps*, Turner, ibidem, p. 269 (1907), ♂. — **Pl. 3, Fig. 61.** — North Queensland.
4. *E. comes*, Turner, ibidem, p. 255 (1907), ♂. — Victoria.
5. *E. crassiceps*, Turner, ibidem, p. 267 (1907), ♂. — North Queensland.
6. *E. cubitalis*, Turner, ibidem, p. 257 (1907), ♂♀. — Victoria.
7. *E. dispar*, Westwood, Arcan. Ent. Vol. 2, p. 144 (1844), ♂♀. — South Australia.
8. *E. fallax*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 35 (1859), ♂. — South Australia.
   E. fallax, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 252 (1907), ♂
9. *E. ferrugineiceps*, Turner, ibidem, p. 268 (1907), ♂. — New South Wales.
10. *E. fulvicostalis*, Turner, ibidem, p. 263 (1907) ♂♀. — North Queensland.
11. *E. grandiceps*, Turner, ibidem, p. 248 (1907), ♂♀. — **Pl. 1, Fig. 15.** — New South Wales.
12. *E. ichneumoniformis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 39 (1859), ♂. — Victoria.
    E. ichneumoniformis, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 252 (1907), ♀.
13. *E. inconspicua*, Turner, ibidem, p. 262 (1907), ♂. — North Queensland.
14. *E. lucida*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 36 (1859), ♂. — Tasmania.
15. *E. lucidula*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 266 (1907), ♂♀. — **Pl. 3, Fig. 62, 63.** — Eastern Australia.
16. *E. mutabilis*, Turner, Trans. Ent. Soc. Lond p. 80 (1908), ♂. — North Australia.
17. *E. opaca*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 255 (1907), ♂. — Victoria.
18. *E. osculans*, Turner, ibidem, p. 264 (1907), ♂. — North Queensland.
19. *E. parca*, Turner, ibidem, p. 263 (1907), ♂♀. — North Queensland.
20. *E. pseudosedula*, Turner, ibidem, p. 251 (1907), ♂. — South Australia.
21. *E. ruficornis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 34 (1859), ♂. — Western Australia.
22. *E. ruficrus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 249 (1907), ♂. — New South Wales.
23. *E. rufopicta*, Smith, Descr. New Spec. Hym. p. 159 (1879), ♂. — South Eastern Australia.
24. *E. scutellata*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 265 (1907), ♂♀. — North Queensland.
25. *E. subacta*, Turner, ibidem, p. 254 (1907), ♂♀. — South Australia.
26. *E. tenebrosa*, Turner, ibidem, p. 261 (1907), ♂♀. — Victoria.
27. *E. tenuipalpa*, Turner, ibidem, p. 260 (1907), ♂♀. — North Queensland.
28. *E. tristis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 34 (1859), ♂. — Australia.
29. *E. tuberculata*, Smith, ibidem, p. 41 (1859), ♂♀. — Victoria.
30. *E. vitripennis*, Smith, ibidem, p. 41 (1859), ♂♀. — Victoria.

4. Genus ÆLURUS, Klug

Ælurus. Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 42 (1842).
Cophothynnus. Turner, Trans. Ent. Soc. Lond. p. 79 (1908).

Characters. — *Female.* — Head much longer than broad, almost rectangular; the clypeus without a carina; maxillary and labial palpi both four-jointed. Antennæ stout, the apical joint of the flagellum long; the front above the base of the antennæ bilobed. Pronotum much narrower than the head, much longer than broad and slightly narrowed anteriorly; mesopleuræ showing a dorsal surface

on each side of the scutellum; median segment of about the same length as the pronotum, the dorsal surface flattened, with a deep and large median depression near the base. Abdomen cylindrical, as long as the head, thorax and median segment combined; the second segment not differentiated. Sixth dorsal segment straight and rather narrow, more than twice as long as broad, not truncate or compressed, the sides of the hypopygium recurved and showing a distinct dorsal surface on each side of the dorsal segment. Legs short, the tarsal ungues simple, or with a blunt tooth on the inner margin near the base.

Male. — Clypeus very variable, truncate or emarginate; the mandibles bidentate. Maxillary palpi six-jointed, the three apical joints very long and slender, the galea not divided; the labial palpi four-jointed. Antennæ slender, about as long as the head, thorax and median segment combined, the apical joints arcuate. Median segment rather long. Abdomen usually long and slender. the division between the two basal ventral segments not deeply marked; the hypopygium produced considerably beyond the seventh dorsal segment and rounded at the apex, without a spine.

Very near the Australian *Eirone*, Westwood, from which it may be distinguished in the male sex by the produced hypopygium, and in the female by the depression on the median segment and the narrowed sixth dorsal segment.

Type of the genus : *Æ. nasutus*, Klug.

Geographical distribution of species. — Brazil and Chile.

1. *Æ. clypeatus*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 43 (1842), ♂. South Brazil.
2. *Æ. gayi*, Spinola, in Gay, Hist. fis. Chile, Zool. Vol. 6, p. 304, p. 304 (1851), ♂. Chile.
   Æ. gayi, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 133 (1867), ♀.
3. *Æ. iridipennis*, Smith, Descr. New Spec. Hym. p. 181 (1879), ♂. Ega.
4. *Æ. nasutus*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 43 (1842), ♂ ♀. Brazil.
5. *Æ. tridens*, Spinola, in Gay, Hist. fis. Chile, Zool. Vol. 6, p. 303 (1851), ♂. Chile.

3. SUBFAM. THYNNINÆ, ASHMEAD

KEY TO THE GENERA

Female :

1. *South American species* . . . . . 2.
   Australian and Austro-Malayan species . . . . . 10.
2. *Second abdominal segment with two or more transverse carinae, not rugose* . . . . . 3.
   Second abdominal segment without transverse carinae, except as forming the margins of a rugose area . . . . . 4.
3. *First abdominal segment strongly narrowed to the base; prosternum produced anteriorly into a short neck.* . . . 4. Genus SPILOTHYNNUS, Ashmead.
   First abdominal segment not narrowed at the base; prosternum not produced into a neck . . . . . 5. Genus SCOTÆNA, Klug.
4. *Second abdominal segment transversely rugose between two transverse carinae* . . . . . 5.

Second segment more or less broadly depressed at the apex, the basal portion sharply divided from the apical . . . . . 8.

5. *Sixth dorsal segment narrow* . . . . . 6.

Sixth dorsal segment broad. . . . . . 7.

6. *Sixth dorsal segment short; the hypopygium produced far beyond it, broadened and rounded; pronotum excavated on the sides* . . . . . 12. Genus EUCYRTOTHYNNUS, nov. gen.

Pygidium narrow and elongate, nearly three times as long as broad; pronotum not excavated . . . . . 11. Genus AMMODROMUS, Guérin.

7. *Hypopygium not produced much beyond the very broad dorsal segment; pronotum either not excavated or excavated on the middle of the anterior margin* . . . . 10. Genus ELAPHROPTERA, Guérin.

Hypopygium narrower and more produced; pronotum subconcavely or obliquely depressed on the sides . . . . 6. Genus ORNEPETES, Guérin.

8. *Median segment short and depressed, the dorsal surface slightly concave on the sides, with a median longitudinal carina. Front with a very large deep puncture* . . . 7. Genus PSEUDELAPHROPTERA, Ashmead.

Median segment not depressed, the dorsal surface normal; front without a deep puncture . . . . . 9.

9. *The depressed apical portion of the second abdominal segment smooth or finely aciculate* . . . . . 8. Genus PARELAPHROPTERA, nov. gen.

The depressed apical portion of the second abdominal segment rugulose . . . . . 9. Genus ANODONTYRA, Westwood.

10. *Second dorsal segment not striated.* . . . . . 11.

Second dorsal segment carinated transversely or rugose between two carinae . . . . . 12.

11. *Head large and not convex; the pronotum excavated on the sides; mesopleurae not convex, produced outward anteriorly; anterior tibiae more or less abnormal in shape.* . 14. Genus ARIPHRON, Erichson.

Head rather smaller and slightly convex, pronotum not excavated, mesopleurae and anterior tibiae normal . . 15. Genus TACHYNOMYIA, Guérin.

12. *Second dorsal segment transversely rugose between two transverse carinae* . . . . . 13.

Second dorsal segment transversely carinated. . . . . . 14.

13. *Pygidium not compressed or truncate; posterior femora normal. Of rather small size* . . . . . 19. Genus PHYMATOTHYNNUS, Turner.

Pygidium vertically truncate, the surface of the truncation broadly oval; posterior femora emarginate. Of very large size. . . . . . 16. Genus MEGALOTHYNNUS, nov. gen.

14. *Second dorsal segment with a broad, thick carina near the apex, with or without one or two narrower carinae near the base; head and thorax very coarsely punctured; pygidium not truncate or compressed* . . . . . 18. Genus PSAMMOTHYNNUS, Ashmead.

The pre-apical carina of the second dorsal segment not broad and thick; head and thorax not coarsely punctured . . . . . 15.

15. *Fifth ventral segment punctured* . . . . . 16.

Fifth ventral segment rugose or striated . . . . . 27.

16. *Pronotum with a short median sulcus from the middle of the anterior margin* . . . . . 17.

Pronotum without a sulcus . . . . . 21.

17. *Anterior angles of the pronotum subtuberculate* . . . . . 18.

Anterior angles of the pronotum not subtuberculate . . . . . 19.

18. *Second dorsal segment with four transverse carinae; pygidium simple not narrowed or truncate* . . . . . 22. Genus ZELEBORIA, Saussure.

Second dorsal segment with three transverse carinae; pygidium deflexed, elongate ovate . . . . . 23. Genus AGRIOMYIA, Guérin.

19. *Pygidium with a tuft of fulvous hair on each side* . . . 25. Genus LEIOTHYNNUS, nov. gen.

Pygidium without a tuft of hair . . . . . 20.

20. *Second dorsal segment with two carinae; pygidium not contracted or deflexed* . . . . . 25. Genus AULACOTHYNNUS, nov. gen.

Second dorsal segment with three carinae; pygidium contracted and elongate . . . . . 24. Genus ASTHENOTHYNNUS, nov. gen.

21. *Pronotum with a longitudinal median carina or tubercle* . . . . . 22.

Pronotum without a carina or tubercle. . . . . . 25.

22. *Second dorsal segment with three carinae* . . . . . 23.

Second dorsal segment finely transversely multistriate, with one transverse carina near the base. . . . . . 32. Genus DORATITHYNNUS, nov. gen.

23. *Second dorsal segment with the space between the three carinae and the apex broad and finely transversely striated* . . 31. Genus ACANTHOTHYNNUS, nov. gen.

Second dorsal segment without transverse striae, the space between the carinae and the apex narrow . . . . . 24.

24. *The carina on the pronotum broad, the sides depressed* . . 29. Genus TMESOTHYNNUS, nov. gen.

The carina on the pronotum narrow or only represented by a tubercle . . . . . 28. Genus EPACTIOTHYNNUS, nov. gen.

25. *Pygidium deflexed, with a tuft of hair on each side.* . . . . . 26.

Pygidium almost vertically truncate, without hairs . . . 20. Genus GLAPHYROTHYNNUS, nov. gen.

26. *Pygidium long and narrow, arched at the base* . . . . 30. Genus ÆOLOTHYNNUS, Ashmead.

Pygidium short, ovate . . . . . 27. Genus GYMNOTHTYNNUS, nov. gen.

27. *Pygidium not narrowed at the base.* . . . . . 28.

Pygidium more or less narrowed at the base . . . . . 32.

28. *Pygidium broad, vertically truncate, with a spine or pointed lobe on each side near the apex, longitudinally striate* . 34. Genus HEMITHYNNUS, Ashmead.

Pygidium without spines or lobes . . . . . 29.

29. *Second dorsal segment multicarinate in the middle, a broad space at the base and apex either smooth or with lower carinae* 36. Genus MACROTHYNNUS, nov. gen.

Second dorsal segment more evenly carinated . . . . . 30.

30. *Pygidium vertical* . . . . . 31.

Pygidium oblique. . . . . . 42. Genus LEPTOTHYNNUS, nov. gen.

31. *Clypeus without a carina* . . . . . 35. Genus LOPHOCHEILUS, Guérin.

Clypeus with a carina . . . . . 33. Genus CATOCHEILUS, Guérin.

32. *Pygidium extremely narrow, almost linear at the base, very slightly widened at the apex* . . . . . 33.

Pygidium not extremely narrow 34

33. *Second dorsal segment with four or five carinae; fifth ventral segment rugose* . . . . . 37. Genus THYNNOIDES, Guérin.

Second dorsal segment with three carinae, the space between them and the apex usually finely transversely striated; fifth ventral segment striated . . . . . 38. Genus ELIDOTHYNNUS, nov. gen.

34. *Second dorsal segment with a transverse carina near the base and three more in the middle, the space between them and the apex finely transversely striated.* . . . . . 39. Genus CAMPYLOTHYNNUS, nov. gen.

Second dorsal segment more evenly carinated . . . . . 35.

35. *Pygidium widened from the base to the apex* . . . . . 36.

Pygidium more or less ovate . . . . . 38.

36. *Pygidium with concave depressions on the sides just before the base of the truncation; the sixth dorsal segment with membranous lateral lobes at the apex* . . . . . 37.

Pygidium without concave depressions on the sides; sixth dorsal segment without membranous lobes . . . . . 40. Genus LESTRICOTHYNNUS, nov. gen.

37. *The whole dorsal area of the first abdominal segment strongly transversely carinated* . . . . . 44. Genus POGONOTHYNNUS, nov. gen.

The first dorsal segment obscurely transversely carinated at the apex only . . . . . 43. Genus TACHYNOTHYNNUS, nov. gen.

38. *Pygidium broadly ovate, rarely elongate-ovate and then with the narrow space before the truncation longitudinally striated. Head rarely excavated on the front* . . . . 45. Genus ZASPILOTHYNNUS, Ashmead.

Pygidium elongate ovate, the narrow space before the truncation always transversely striated. Head more or less excavated on the front . . . . . 46. Genus THYNNUS, Fabricius.

Male:

1. *South American species* . . . . . 2.

Australian and Austro-Malayan species . . . . . 14.

2. *Mandibles tridentate at the apex* . . . . . 3. Genus TELEPHOROMYIA, Guérin.

Mandibles bidentate at the apex . . . . . 3.

3. *Mandibles curved, not elbowed.* . . . . . 4.

Mandibles sharply elbowed . . . . . 13.

4. *Clypeus not broadly emarginate* . . . . . 5.

Clypeus broadly emarginate . . . . . 11.

5. *Clypeus narrowly but deeply emarginate, or with a depression simulating an emargination* . . . . . 6.

Clypeus narrowly subemarginate, bidentate or truncate . . . . . 7.

6. *Three apical joints of maxillary palpi moderately elongate; antennae rather short. Hypopygium straight and narrow.* 4. Genus SPILOTHYNNUS, Ashmead.

Three apical joints of maxillary palpi very long; antennae long; hypopygium rounded . . . . . 2. Genus DOLICHOTHYNNUS, nov. gen.

7. *Second recurrent nervure interstitial with the second transverse cubital nervure; hypopygium with a long apical spine; sometimes with a spine at each apical angle* . . 8. Genus PARELAPHROPTERA, nov. gen.

Second recurrent nervure received by the third cubital cell; hypopygium without a long apical spine . . . . . 8.

8. *Clypeus truncate; hypopygium truncate* . . . . . 9. Genus ANODONTYRA, Westwood.

Clypeus bidentate in the middle or narrowly subemarginate. . . . . . 9.

9. *Hypopygium with a very short apical spine, the apical angles produced into a lobe on each side of the spine.* . 7. Genus PSEUDELAPHROPTERA, Ashmead.

Hypopygium without a spine, short and blunt . . . . . 10.

10. *Hypopygium narrow; the posterior coxae subconcave; three apical joints of maxillary palpi slightly elongate.* . . 6. Genus ORNEPETES, Guérin.

Hypopygium broadly and bluntly triangular; posterior coxae not concave; three apical joints of maxillary palpi longer. 5. Genus SCOTÆNA, Klug.

11. *Clypeus as long as broad, the emargination very shallow; the inner tooth of the mandibles acute* . . . . . 11. ? Genus AMMODROMUS, Guérin.

Clypeus short and broad, the emargination deeper; inner tooth of the mandibles broadly truncate . . . . . 12.

12. *Abdomen short and oval.* . . . . . 13. Genus AMBLYSOMA, Westwood.

Abdomen long and narrow . . . . . 12. Genus EUCYRTOTHYNNUS, nov. gen.

13. *Clypeus broadly emarginate; mandibles broadened* . . . 10. Genus ELAPHROPTERA, Guérin.

Clypeus much produced, truncate at the apex; mandibles not broadened . . . . . 1. Genus CHRYSOTHYNNUS, nov. gen.

14. *Second recurrent nervure interstitial with second transverse cubital nervure* . . . . . 17. Genus ONCORHINUS, Shuckard.

Second recurrent nervure received by the third cubital cell . . . . . 15.

15. *Head very strongly hollowed beneath, with a fringe of long recurved hairs on the sides* . . . . . 16.

Head not strongly hollowed beneath, the fringe of hairs on the sides, if present, shorter and not recurved. . . . . . 17.

16. *Hypopygium ending in a strongly recurved blunt process. Of very large size* . . . . . 16. Genus MEGALOTHYNNUS, nov. gen.

Hypopygium otherwise shaped, always with an acute apical spine. Of rather small size. . . . . . 15. Genus TACHYNOMYIA, Guérin.

17. *Abdomen much flattened; more or less fusiform* . . . . . 18.

Abdomen not flattened . . . . . 25.

18. *Hypopygium tridentate; the three apical joints of the maxillary palpi very long and slender* . . . . . 14. Genus ARIPHRON, Erichson.

Hypopygium with only one spine or none; the three apical joints of the maxillary palpi not elongate, or much less so . . . . . 19.

19. *Clypeus large, convex, broad at the apex, with a median carina; hypopygium without an apical spine* . . . . 20. Genus GLAPHYROTHYNNUS, nov. gen.

Clypeus narrow at the apex, not large. . . . . . 20.

20. *Clypeus with a carina; hypopygium emarginate, with a pointed spine on each side at the base and a tuft of hairs* . . . . . 18. Genus PSAMMOTHYNNUS, Ashmead.

Clypeus without a carina . . . . . 21.

21. *Apical joints of the antennae very strongly arcuate* . . . 19. Genus PHYMATOTHYNNUS, nov. gen.

Apical joints of the antennae rather feebly arcuate . . . . . 22.

22. *Antennae as long as the head, thorax and median segment combined, three apical joints of the maxillary palpi moderately elongate, the fourth joint the longest* . . . . . 23.
Antennae considerably shorter than the head, thorax and median segment combined; the three apical joints of the maxillary palpi not elongate . . . . . 24.

23. *Posterior femora tuberculate* . . . . . 21. Genus AULACOTHYNNUS, nov. gen.
Posterior femora not tuberculate . . . . . 22. Genus ZELEBORIA, Saussure.

24. *Clypeus very narrowly truncate at the apex* . . . . . 24. Genus ASTHENOTHYNNUS, nov. gen.
Clypeus more broadly truncate . . . . . 25. Genus LEIOTHYNNUS, nov. gen.

25. *Seventh dorsal segment not produced into a flattened plate* 26
Seventh dorsal segment produced into a flattened plate . . . . . 41.

26. *First ventral segment with a vertical tubercle near the middle; hypopygium with a single short apical spine.* . 23. Genus AGRIOMYIA, Guérin.
First ventral segment without a vertical tubercle . . . . . 27.

27. *Fifth or sixth ventral segment with a spine at the apical angles* . . . . . 28.
Ventral segments without spines . . . . . 30.

28. *A very long stout spine at the apical angles of the fifth ventral segment* . . . . . 29.
A short spine at the apical angles of the sixth ventral segment; fifth segment without spines . . . . . 30. Genus ÆOLOTHYNNUS, Ashmead.

29. *Hypopygium broad, truncate at the apex with three short spines* . . . . . 31. Genus ACANTHOTHYNNUS, nov. gen.
Hypopygium narrow, blunt and without spines, or with one short spine. . . . . . 32. Genus DORATITHYNNUS, nov. gen.

30. *Second recurrent nervure received very near the base of the third cubital cell* . . . . . 31.
Second recurrent nervure received by the third cubital cell not very near the base. . . . . . 35.

31. *Basal angles of the hypopygium not prominent or rounded; antennae shorter than the thorax and median segment combined* . . . . . 32.
Basal angles of the hypopygium prominent or rounded; antennae as long as the head, thorax and median segment combined . . . . . 33. Genus CATOCHEILUS, Guérin.

32. *Hypopygium rounded at the apex with a single spine; clypeus long* . . . . . 26. Genus ASPIDOTHYNNUS, nov. gen.
Hypopygium not rounded; clypeus short . . . . . 33.

33. *Hypopygium truncate, with an apical spine* . . . . . 29. Genus TMESOTHYNNUS, nov. gen.
Hypopygium with a spine on each side at the base of a longer apical spine . . . . . 34.

34. *Clypeus narrowly truncate, not vertical; antennae longer than the thorax without the median segment* . . . . 28. Genus EPACTIOTHYNNUS, nov. gen.
Clypeus broadly truncate, almost vertical; antennae shorter than the thorax without the median segment . . . . 27. Genus GYMNOTHYNNUS, nov. gen.

35. *Apical joints of the antennae much slenderer than the basal.* . . . . . 36.
Apical joints of the antennae little, if at all, slenderer than the basal . . . . . 37.
36. *Abdominal segments rather strongly constricted at the base* . 35. Lophocheilus, Guérin.
Abdominal segments very slightly or not at all constricted . 34. Genus Hemithynnus, Ashmead.
37. *Anterior coxae more or less concave beneath; apical joints of the antennae feebly arcuate* . . . . . 38.
Anterior coxae not concave; apical joints of the antennae not arcuate . . . . . 39.
38. *Anterior coxae feebly concave; hypopygium triangular usually with well marked basal spines or lobes.* . . . . . 40. Genus Lestricothynnus, nov. gen.
Anterior coxae very strongly concave; hypopygium narrowly produced from the basal spines; or more rarely compressed, without basal spines . . . . . 37. Genus Thynnoides, Guérin.
39. *Abdomen fusiform; first ventral segment with a tubercle at the apex* . . . . . 41. Genus Belothynnus, nov. gen.
Abdomen elongate; first ventral segment without a tubercle . . . . . 40.
40. *Median segment short rounded at the sides* . . . . . 38. Genus Elidothynnus, nov. gen.
Median segment oblique from the postscutellum . . . . 39. Genus Campylothynnus, nov. gen.
41. *Sixth ventral segment without a spine at the apical angles* . . . . . 42.
Sixth ventral segment with a spine at the apical angles . . . . . 43.
42. *Antennae slender at the apex; hypopygium broad and rounded* 36. Genus Macrothynnus, nov. gen.
Antennae not slender at the apex; hypopygium long and narrow . . . . . 43. Genus Tachynothynnus, nov. gen.
43. *Antennae slender at the apex* . . . . . 42. Genus Leptothynnus, nov. gen.
Antennae stout, of even thickness throughout . . . . . 44.
44. *Hypopygium tridentate or triangular, rarely truncate at the apex* . . . . . 45.
Hypopypium with five spines . . . . . 46. Genus Thynnus, Fabricius.
45. *Hypopygium narrowly produced from the acute basal spines, the sides almost parallel.* . . . . . 44. Genus Pogonothynnus, nov. gen.
Hypopygium more or less triangular with, or more rarely without, basal spines. . . . . . 45. Genus Zaspilothynnus, Ashmead.

1. Genus CHRYSOTHYNNUS, nov. gen.

Characters. — *Male.* — Clypeus strongly produced, obliquely depressed just before the apex, the apical margin narrowly truncate. Mandibles rather slender, not flattened, strongly bent beyond the middle and bidentate. Labrum contracted close to the base into a very narrow petiole, expanding at the apex. Labial palpi four-jointed, the basal joint the longest; maxillary palpi six-jointed, rather long, the basal joint short, the fourth the longest; the galea rounded at the apex, the dividing line very distinct. Antennæ shorter than the head, thorax and median segment combined, the apical joints strongly arcuate. Thorax as broad as the head, the median segment rounded. Abdomen elongate-fusiform, much narrowed at the base. The groove between the two basal ventral segments is very shallow. Hypopygium

projecting considerably beyond the dorsal segment, narrow, slight broadened at the apex and rounded. Claspers rather short, slightly twisted and narrowly truncate at the apex, the uncus very short.

Female unknown.

Type of the genus : *C. inca*, Turner.

Geographical distribution of species. — Bolivia. Only one species is known.

1. *C. inca*, Turner, Trans. Ent. Soc. Lond. p. 77 (1908), ♂. — **Pl. 1, Fig. 1 ;** Bolivia. Pl. 3, Fig. 68.

2. Genus DOLICHOTHYNNUS, nov. gen.

Characters. — *Male.* — Mandibles bidentate, the inner tooth blunt, but not broadly truncate. Clypeus deeply and narrowly emarginate, the angles of the emargination produced into short teeth. The three apical joints of the maxillary palpi very long and slender. Antennæ much longer than the head, thorax and median segment combined, the seven apical joints rather strongly arcuate. Median segment as broad at the base as long. Abdomen elongate, slender, much narrowed at the base, flattened, the segments slightly constricted at the base, the sides clothed with long, sparse pubescence. Hypopygium produced a little beyond the dorsal segment, the exposed portion broader than long and rounded. Second cubital cell very much shorter than the third on the radial nervure.

Female unknown.

Fox places the species which I assign to this genus in *Ælurus*, but I do not think he is correct; there being no sign of the shortening of the third cubital cell on the radial nervure usually found in that genus. I have been unable to examine the genitalia; but I look on the genus as allied to *Scotaena* rather than to *Ælurus*.

Type of the genus : *D. carbonarius*, Smith.

Geographical distribution of species. — South Brazil.

1. *D. aethiops*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p.38 (1842), ♂. South Brazil.
2. *D. anthracinus*, Klug, ibidem, p. 39 (1842). South Brazil.
3. *D. carbonarius*, Smith, Descr. New Spec. Hym. p. 177 (1879), ♂. South Brazil.

3. Genus TELEPHOROMYIA, Guérin

Telephoromyia. Guérin, in Duperrey, Voy. Coquille, Zool. Vol. 2, p. 213 (1839).
Tachypterus. Weyenbergh, Berl. Ent. Zeitschr. Vol. 27, p. 279 (1883) (nec Guérin).

Characters. — *Female* unknown to me.

Male. — Clypeus broad and short, usually with a shallow depression resembling a narrow emargination on the middle of the anterior margin. Mandibles tridendate at the apex, not elbowed, the outer tooth much the longest, the two inner teeth acute. Hypopygium narrow, projecting very little beyond the dorsal segment, rounded or deeply emarginate at the apex. Second recurrent nervure received by the third cubital cell in the typical species, in some others close to the apex of the second cubital cell.

Otherwise as in *Spilothynnus*.

Type of the genus : *T. rufipes*, Guérin.

Geographical distribution of species. — South America and California.

1. *T. anthracina*, Ashmead, Psyche, Vol. 8, p. 251 (1898), ♂. California.
2. *T. argentina*, Weyenberg, Berl. Ent. Zeitschr. Vol. 27, p. 279 (1883), ♂♀. Argentina.
3. *T. cordoviensis*, Weyenberg, ibidem, p. 282 (1883), ♂ ♀. Argentina.
4. *T. rufipes*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 216 (1839), ♂. Chile.
5. *T. tridentifera*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 131 (1909), ♂. West Argentina.

4. Genus SPILOTHYNNUS, Ashmead

Spilothynnus. Ashmead, The Canad. Entom. Vol. 35, p. 103 (1903).

The material available to me for this genus and the allied groups *Telephoromyia* and *Scotaena* is extremely limited and I am not confident that their separation will be found to be justified. The form of the mandibles in the male does not seem to be a reliable generic character in the group, nor the depth of the emargination of the clypeus.

Characters. -- *Female.* — Clypeus without a carina, short, broadly and very shallowly emarginate at the apex. Mandibles falcate; maxillary palpi six-jointed (according to Ashmead four-jointed in the typical species), short, the first joint the shortest; labial palpi four-jointed. Head convex, much broader than long, rounded posteriorly; the antennæ inserted far apart, with a short longitudinal sulcus between them. Eyes small, almost round, touching the base of the mandibles. Pronotum narrower than the head, as long as broad or longer; the prosternum produced anteriorly and forming a short neck. Median segment obliquely truncate from the scutellum. Abdomen very narrow at the base, thence broadened to the third segment; the basal segment with a broad transverse depression at the apex; the second segment with two transverse carinæ curved laterally. Pygidium contracted at the base; the sixth dorsal segment almost vertically truncate, the surface of the truncation elongate ovate; the hypopygium produced much beyond the dorsal segment, the sides broadly recurved and surrounding the dorsal segment. Tarsal ungues bidentate; the tarsi slender, sparsely pubescent.

Male. — Clypeus short and broad, narrowly and more or less deeply emarginate or with a depression resembling an emargination on the middle of the anterior margin. Mandibles bidentate at the apex, sometimes curiously distorted and broadened on the inner margin, the outer tooth the longest. Maxillary palpi six-jointed, rather long, the basal joint short, the three apical joints usually moderately elongate, but sometimes very little longer than the second and third. Labium rather short, the labial palpi four-jointed, the basal joint the longest. Antennæ about as long as the thorax and median segment combined, the apical joints slightly arcuate. Median segment rounded, nearly as long as broad. Abdomen elongate, narrowed at the extremities, the segments in some species constricted at the base, but more usually not so; the groove between the two basal ventral segments shallow and narrow. Hypopygium narrow, the sides parallel, produced considerably beyond the dorsal segment and subtruncate or feebly emarginate at the apex. Second recurrent nervure received by the third cubital cell at a considerable distance from the base.

Type of the genus : *S. laetus*, Klug.

Geographical distribution of species. — South America.

1. *S. bituberculatus*, Turner, Trans. Ent. Soc. Lond. p. 70 (1908), ♀; Ann. Mag. Nat. Hist. (8), Vol 3, p. 132 (1909), ♂. — **Pl. 3, Fig. 71, 72.** Mendoza.
2. *S. excisus*, Turner, Trans. Ent. Soc. Lond. p. 69 (1908), ♂. Peru.

3. *S. fastuosus*, Smith, Descr. New Spec. Hym. p. 170 (1879), ♂.	Locality doubtful.
4. *S. flavovariegatus*, Smith, ibidem, p. 170 (1879), ♂.	Locality doubtful.
5. *S laetus*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 41 (1842), ♂.	Chile.
S laetus, Spinola, in Gay, Hist. fis. Chile, Zool. Vol. 6, p. 289 (1851), ♀.	
6. *S. peruvianus*, Turner, Trans. Ent. Soc. Lond. p. 66 (1908), ♂ ♀. — Pl. I, Fig. 2, 3.	Peru.
7. *S. remotus*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 4, p. 338 (1909), ♂.	South Brazil.
8. *S. turbulentus*, Turner, ibidem, p. 71 (1908), ♂.	Venezuela.
9. *S. vinculatus*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 32 (1842), ♂.	South Brazil.
10. *S.* ? *lepidus*, Klug, ibidem, p. 31 (1842), ♂.	South Brazil.

5. Genus SCOTÆNA, Klug

Scotæna. Klug, Mag. Ges. Naturf. Freunde Berlin, Vol. 4, p. 38 (1810).

Characters. — *Female.* — Pronotum much broader than long; the prosternum not produced into a neck anteriorly; median segment short and broadened posteriorly. First abdominal segment truncate anteriorly, not narrowed, with a transverse groove before the apex; second segment with two or more transverse carinæ. Pygidium similar to that of *Spilothynnus*, but with the sixth dorsal segment narrower.

Male. — Clypeus bidentate in the middle of the anterior margin, moderately produced and not emarginate. Mandibles bidentate. First joint of the maxillary palpi short, the three apical joints rather long and slender. Abdominal segments usually, but not always, constricted at the base. Hypopygium short, very little produced beyond the dorsal segment, subtriangular, the apex blunt. Second recurrent nervure received by the third cubital cell.

Type of the genus : *S. trifasciata*, Klug.

Geographical distribution of species. — Brazil.

1. *S. decora*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 51 (1859), ♂.	Lower Amazon.
2. *S. duckei*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 4, p. 341 (1909), ♂ ♀.	Ceara.
3. *S. pubescens*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 31 (1842), ♂.	South Brazil.
4. *S. trifasciata*, Klug, Mag. Ges. Naturf. Freunde Berlin, Vol. 4, p. 40 (1810), ♂.	Brazil.
5. *S. vetusta*, Turner, Ann. Nag. Nat. Hist. (8), Vol. 4, p. 340 (1909), ♂ ♀.	South Brazil.
6. *S.* ? *pallida*, Fox, Proc. Acad. Nat. Sc. Philad. Vol. 50, p. 74 (1898), ♀.	Central Brazil.

6. Genus ORNEPETES, Guérin

Ornepetes. Guérin, in Duperry, Voy. Coquille, Zool. Vol. 2 (2), p. 214 (1839).

Characters. — *Female.* — Mandibles simple, not bidentate; the clypeus without a carina. Head convex, broader than long, with a faint, longitudinal, frontal sulcus, ending in a large puncture in the middle of the front; this puncture is much smaller than in the females of the genus *Pseudelaphroptera*. Pronotum narrower than the head, broader than long, depressed towards the front and deeply excavated on the sides; the dorsal surface of the median segment flat, without a carina, broadened posteriorly. Abdomen much broader than the thorax, the first segment with a broad transverse groove before the apex; the second segment with a low transverse carina near the base and another before the apex, the

space between the carinæ finely rugulose. Sixth dorsal segment narrow, longer than broad and subtruncate at the apex; the hypopygium projecting beyond the dorsal segment and narrowly rounded at the apex. Fifth ventral segment sparsely but deeply punctured. Tarsal ungues simple.

Male. — Mandibles rather broad, bidentate, the inner tooth short and blunt. Clypeus moderately produced, with two short teeth on the apical margin, which is feebly emarginate between the teeth. Maxillary palpi six-jointed, the galea rounded at the apex. Labrum shorter than the maxillæ, the labial palpi four-jointed, the first joint the longest. Labium small, very short, the anterior margin broad and almost straight. Head rounded; the antennæ rather slender and longer than the thorax and median segment combined. Pronotum narrower than the head, the median segment rounded. Abdomen longer than the head, thorax and median segment combined, narrowed at the extremities, the sides nearly parallel. Hypopygium linguiform, rounded at the apex, projecting very slightly beyond the dorsal segment. Claspers long and slender, the uncus short. The groove between the two basal ventral segments is broad and rather deep. Tarsal ungues bidentate.

Type of the genus : *O. nigriceps*, Guérin.

Geographical distribution of species. — Chile.

1. *O. albonotata*, André, Zeitschr. f. Hym. Dipt. Vol. 4, p. 313 (1904), ♂♀. Chile.
2. *O. nigriceps*, Guérin, in Duperrey, Voy. Coquille, Zool. Vol. 2 (2), p. 239 (1839), ♂ Chile.

7. Genus PSEUDELAPHROPTERA, Ashmead

Pseudelaphroptera. Ashmead, The Canad. Entom. Vol. 35, p. 101 (1903),

Characters. — *Female.* — Mandibles stout, with a blunt tooth on the inner margin before the apex. Head subquadrate, slightly convex, and almost smooth, with a large deep puncture on the front almost midway between the base of the clypeus and the posterior margin of the head. Pronotum rectangular, broader than long, much narrower than the head; scutellum prominent. Median segment much shorter than the pronotum, broadened from the base and truncate posteriorly, depressed below the scutellum, the dorsal surface flattened and usually divided by a longitudinal carina. Abdominal segments very broadly depressed at the apex, the raised portion before the depression either straight or broadly emarginate posteriorly. Pygidium narrowly rounded at the apex, longer than broad, but not truncate or compressed. Tarsal ungues simple.

Male. — Mandibles bidentate; the clypeus very feebly emarginate and bidentate at the apex. Antennæ shorter than the thorax and median segment combined, of about even thickness throughout. Head rather small and rounded, very little broader than the pronotum; mesonotum with two longitudinal sulci on each side; the median segment rounded. Head and thorax opaque, closely punctured and pubescent. Abdomen fusiform, the segments transversely depressed at the base. Hypopygium short, ending in three small spines, the median spine not longer than the lateral spines, which are sometimes broadened into lobes rounded at the apex. Tarsal ungues bidentate.

Maxillary palpi six-jointed, the basal joint short; the galea rounded at the apex; labial palpi four-jointed.

Type of the genus : *P. tricolor*, Spinola.

Geographical distribution of species. — Chile and Southern Argentina.

1. *P. chilensis*, Saussure, Reise Novara. Zool. Vol. 2, Hym. p. 128 (1867), ♂♀. Southern Argentina.
2. *P. claraziana*, Saussure, ibidem, p. 127 (1867), ♀. Southern Argentina.

3. *P. quadrizonata* Spinola, in Gay, Hist. fis. Chile, Zool. Vol. 6, p. 291 (1851), ♂♀. Chile.
4. *P. tricolor* Spinola, in Gay, ibidem, p. 294 (1851), ♂♀. Chile.

8. Genus PARELAPHROPTERA, nov. gen.

Characters. — *Female.* — Mandibles bidentate, the inner tooth very short and truncate at the apex. Clypeus without a carina. Labrum transverse, about three times as broad as long, a little narrowed anteriorly, the anterior margin straight, a transverse carina near the base. Maxillary palpi six-jointed, shorter than the maxillæ; labial palpi four-jointed. Head subrectangular, broader than long, rounded at the posterior angles and sligthly convex, without a deep frontal puncture. Pronotum rectangular, broader than long, narrower than the head; median segment shorter than the pronotum, broadened from the base and obliquely truncate posteriorly, the dorsal surface not flattened or carinated. Abdomen broader than the thorax, truncate at the base, almost smooth; the two basal segments very shallowly depressed on the apical margin. Pygidium normal, not compressed, rounded at the apex. Tarsal ungues simple.

Male. — Mandibles bidentate, the inner tooth short and blunt but not truncate. Clypeus produced anteriorly rather narrow at the apex, the apical margin almost truncate or shallowly emarginate, the apical angles prominent or produced into short teeth. Labrum very short, narrowed posteriorly and very broadly and shallowly emarginate anteriorly, with a transverse carina at the base. Maxillary palpi longer than the maxillæ, six-jointed, the basal joint the shortest, the fourth and fifth slightly longer than the others; labial palpi four-jointed, the basal joint the longest. Antennæ longer than the thorax and median segment combined, of almost even thickness throughout. Head a little broader than the pronotum; the median segment rounded at the sides, obliquely depressed posteriorly. Abdomen rather longer than the head, thorax and median segment combined, narrowed at the extremities, the segments not constricted; a broad, but rather shallow groove between the two basal ventral segments. Hypopygium tridentate or truncate with an apical spine, the apical spine long, the spines at the apical angles, when present, much shorter. Legs rather short, the tarsal ungues bidentate. The second recurrent nervure is almost or quite interstitial with the second transverse cubital nervure.

Type of the genus : *P. flavomaculata*, André.

Geographical distribution of species. — South Chile and Western Argentina.

Nearly allied to *Pseudelaphroptera*, Ashmead, from which it may be distinguished in the female by the absence of the deep frontal puncture, the normal dorsal surface of the median segment and the less strongly depressed margins of the abdominal segments : in the male by the very distinct hypopygium and the position of the second recurrent nervure.

1. *P. flavomaculata*, André, Zeitschr. f. Hym. Dipt. Vol. 4, p. 311 (1904), ♂♀. Conception.
2. *P. haarupi*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 133 (1909), ♀. Mendoza.
3. *P. rollei*, Turner, Trans. Ent. Soc. Lond. p. 72 (1908), ♂. — Pl. 3, Fig. 73. Mendoza.

9. Genus ANODONTYRA, Westwood

Anodontyra. Westwood, Proc. Zool. Soc. Lond. Vol. 3, p. 70 (1835).

Characters. — *Female.* — Clypeus without a carina; the mandibles rather stout. Labrum very short, transverse, ciliate on the anterior margin and with a transverse carina at the base. Labium small

but rather broad, the labial palpi four-jointed, the basal joint the longest. Maxillary palpi short, six-jointed, the basal and apical joints the shortest, shorter than the maxilla. Head subquadrate, a little broader than long and rounded at the posterior angles, moderately convex; a longitudinal sulcus on the front ending in a large shallow puncture; the eyes ovate, touching the base of the mandibles; the position of the ocelli indicated by shallow punctures. Pronotum much narrower than the head, broader than long, not excavated; the scutellum and median segment of about equal length, the latter not flattened or excavated. Abdominal segments depressed at the apex, very broadly in the middle; the second segment with a raised transverse carina strongly emarginate posteriorly in the middle, the depressed apical portion rugulose. Pygidium obliquely depressed, more than twice as long as broad, the hypopygium projecting much beyond the sixth dorsal segment and subtruncate at the apex. Fifth ventral segment punctured. Tarsal ungues bidentate. Intermediate tibiæ with two spines, which are short and of nearly equal length.

Male. — Clypeus narrowly produced and truncate at the apex; the mandibles bidentate and slightly bent in the middle. Labium short and rather broad, the labial palpi four-jointed, the basal joint the longest. Maxillary palpi six-jointed, the basal joint short. Head rounded, of about the same breadth as the pronotum, the antennæ inserted far apart, equal in length to the thorax and median segment combined, of nearly equal thickness throughout, the apical joints feebly arcuate. Median segment oblique; the abdomen elongate fusiform. Hypopygium produced slightly beyond the dorsal segment, narrow and truncate at the apex. The claspers are broad at the base, narrowly produced downwards near the apex and clothed with setæ at the extremity. The groove between the two basal ventral se ments is deep.

Type of the genus : *A. tricolor*, Westwood.

Geographical distribution of species. — Chili. Two species only are known.

1. *A. strenua*, Smith, Descr. New Spec. Hym. p. 171 (1879), ♂. Chile.
2. *A. tricolor*, Westwood, Proc. Zool. Soc. Lond. Vol. 3, p. 71 (1835), ♂. Chile.
   A. tricolor, André, Zeitschr. f. Hym. Dipt. Vol. 4, p. 317 (1904), ♀.

10. Genus ELAPHROPTERA, Guérin

Elaphroptera. Guérin, in Duperrey, Voy. Coquille, Zool. Vol. 2, p. 214 (1839).
Ammodromus. Guérin, ibidem, p. 244 (1839) (pars).
Pycnothynnus. Ashmead, The Canad. Entom. Vol. 35, p. 101 (1903).
Klugianus. Ashmead, ibidem, p. 102 (1903).

Characters. — *Female.* — Clypeus transverse, without a carina. Maxillary palpi six-jointed, the basal joint very short, the others about equal to each other in length, the third joint obliquely produced at the apex, the three apical joints slender. Labial palpi four-jointed, stout, the labium short and broad. The dividing line of the galea is far from the apex, which is strongly rounded. Head much broader than the pronotum, subrectangular, rounded at the posterior angles and broader than long, not excavated, thick and moderately convex. Pronotum not excavated, or excavated anteriorly, broader than long, the scutellum rather small. Median segment short, obliquely truncate posteriorly, the surface of the truncation sometimes concave. Abdomen narrowed at the base, with a dense tuft of hairs above the anterior truncation; the first segment with a shallow transverse groove at the apex, the second segment transversely rugose, with a transverse groove at the apex between two carinæ. Pygidium longer than broad,

rounded at the apex, the sixth dorsal segment usually notched at the sides near the base. Fifth ventral segment punctured; the groove between the two basal ventral segments well marked Tarsal ungues bidentate.

Male. — Clypeus strongly and broadly emarginate at the apex; the mandibles sharply bent downwards near the middle and flattened towards the apex, bidentate, the inner tooth short. Labrum transverse, more than three times as broad as long, the apical portion depressed, truncate anteriorly and rounded at the sides, the basal portion raised into a broadly emarginate carina strongly ciliated anteriorly. Labium rather broad, the labial palpi four-jointed and rather stout; the maxillary palpi six-jointed, the basal joint short, the three apical joints slenderer and slightly longer than the second and third, the galea strongly rounded at the apex. Antennæ as long as the thorax and median segment combined, the apical joints strongly arcuate. Abdomen longer than the head and thorax combined, the hypopygium narrow, the sides nearly parallel, very feebly trilobed or conical at the apex, with a very short apical spine. The abdomen is flattened and slender, more strongly narrowed at the base than at the apex.

Type of the genus : *E. scoliaeformis*, Haliday.

Geographical distribution of species. — Chile, Patagonia and South Brazil.

1. *E. arcuata*, Turner, Trans. Ent. Soc. Lond. p. 76 (1908), ♂. — Patagonia.
2. *E. atra*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 241 (1839), ♂. — Chile.
   E. atra, André, Zeitschr. f. Hym. Dipt. Vol. 6, p. 310 (1904), ♀.
3. *E. erythrura*, Spinola, in Gay, Hist. fis. Chile, Zool. Vol. 6, p. 295 (1851). — Chile.
   E. relicta, Saussure, Reise Novara, Zool. Vol. 2, Hym p. 126 (1867), ♀.
4. *E. haematodes*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 37 (1842), ♂ ♀. — South Brazil.
5. *E. herbstii*, André, Zeitschr. f. Hym. Dipt. Vol. 6, p. 308 (1904), ♂. — Chile.
   E. herbstii, Turner, Trans. Ent. Soc. Lond. p. 75 (1908), ♀.
6. *E. hyalinipennis*, Spinola, in Gay, Hist. fis. Chile, Zool. Vol. 6, p. 296 (1851), ♂. — Chile.
7. *E. intaminata*, Smith, Descr. New Spec. Hym. p. 173 (1879), ♂. — Chile, Patagonia.
8. *E. nigripennis*, Smith, ibidem, p. 172 (1879), ♂. — Chile, Patagonia.
9. *E. promissa*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 134 (1909), ♀. — Chile.
10. *E. racovitzei*, André, Ann. Soc. Ent. Belg. Vol. 64, p. 105 (1900), ♀ (*intaminata*, Smith, ♀ ?). — Patagonia.
11. *E. scoliaeformis*, Haliday, Trans. Linn. Soc. Lond. Vol. 12 (3), p. 327 (1836), ♀. — **Pl. I, Fig. 4, 5, 6, 7.** — Chile.
    Myrmosa dimidiata, Haliday, ibidem, p. 328 (1836), ♂.
12. *E. vulpina*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 36 (1842), ♂. — South Brazil.
13. *E. ?ruficeps*, Guérin, Voy. Coquille, Zool Vol. 2, p. 245 (1839), ♀. — South Brazil.
14. *E. ?tarsata*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 39 (1842), ♂. — South Brazil.

II. Genus AMMODROMUS, Guérin

Ammodromus. Guérin, Duperrey, Voy. Coquille, Zool. Vol. 2, p. 244 (1839).

Characters. — *Female.* — Clypeus narrowly emarginate; the labrum prominent, the anterior margin straight and ciliate. Maxillary palpi six-jointed, the basal joint short, the second the longest; labial palpi four-jointed. Mandibles simple, not bidentate. Head convex, broader than long, with a longitudinal frontal sulcus. Pronotum twice as broad as long, without any concave depressions. Second

abdominal segment with the apical third very much depressed, giving the appearance of a transverse carina before the depression; the first, third and fourth segments less broadly depressed at the apex, most broadly in the middle. Pygidium truncate posteriorly, the surface of the truncation elongate, rather broader at the apex than at the base, nearly three times as long as the breadth at the apex.

Male not certainly known.

Type of the genus : *A frontalis*, Guérin.

Geographical distribution of species. — Patagonia.

1. *A. frontalis*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 245 (1839), ♀ (*fasciatus*, ♀?). Patagonia.
2. *A.? fasciatus*, Guérin, ibidem, p. 242 (1839), ♂. Patagonia.
3. *A.? ingenuus*, Smith, Descr. New Spec. Hym. p. 173 (1879), ♂. Patagonia.

12. Genus EUCYRTOTHYNNUS, nov. gen.

Characters. — *Female.* — Head subrectangular, broader than long, thick and slightly convex; the clypeus without a carina, broadly but feebly emarginate at the apex. Labial palpi four-jointed, maxillary palpi six-jointed. Eyes small and nearly round, situated near the base of the mandibles. Front with a short median sulcus. Pronotum much narrower than the head, broader than long, excavated on the sides, the anterior margin subtuberculate in the middle, in some species prominent in the middle and at the angles. Scutellum broadly truncate at the apex; median segment very short, oblique and often slightly concave posteriorly. First abdominal segment with a very shallow and narrow transverse groove before the apex; second segment transversely rugose, with a transverse carina separated by a broad groove from the recurved apical margin; the fifth ventral segment rugose. Pygidium rather narrow, deflexed, the sixth dorsal segment short and narrow, truncate at the apex, the hypopygium extending far beyond the dorsal segment, rounded at the apex and expanding more or less. Tarsi rather slender, the ungues bidentate; the intermediate tibiæ with two apical spines of almost equal length.

Male. — Clypeus very broad and short, depressed anteriorly and very broadly emarginate, the angles prominent. Labrum broadly and shallowly emarginate at the apex, very short and broad, with a broad, strongly raised, and broadly emarginate carina close to the base. Labial palpi four-jointed, stout, the basal joint rather the longest. Maxillary palpi six-jointed, the basal joint very short, the galea rounded at the apex. Antennæ about as long as the head and thorax combined (without the median segment), the apical joints slightly arcuate, widely separated at the base. Head short and broad, much broader than the pronotum. Mandibles curved, not strongly elbowed, the apical tooth acute, the tooth on the inner margin very broad and short, truncate at the apex and forming a cutting edge. Scutellum more or less elevated in the middle. Abdomen much longer than the head and thorax united, elongate, slender at the base. Hypopygium projecting very little beyond the dorsal segment, narrow, the sides nearly parallel, rounded at the apex. The claspers are long and narrow, pointed at the apex, fully twice as long as the uncus.

The genus is very near *Amblysoma*, Westwood, which I have not seen, but the abdomen in that genus is ovate and much shorter than the thorax.

Type of the genus : *E. lateralis*, Klug.

Geographical distribution of species. — South Brazil, Argentina and Bolivia.

1. *E. apicalis*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 244 (1839), ♂. South Brazil.
2. *E. avidus*, Turner, Trans. Ent. Soc. Lond. p. 73 (1908), ♂. — **Pl. 3, Fig. 69, 70.** North West Argentina.
3. *E. clitellatus*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 35 (1842), ♀ (*lateralis*, ♀?). South Brazil.
4. *E. consobrinus*, Klug, ibidem, p. 26 (1842), ♂. South Brazil.
5. *E. cornutus*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 243 (1839), ♂. South Brazil.
6. *E. haemorrhoidalis*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 28 (1842), ♂. South Brazil.
7. *E. ichneumoneus*, Klug, ibidem, p. 25 (1842), ♂. South Brazil.
8. *E. interruptus*, Klug, ibidem, p. 26 (1842), ♂. South Brazil.
9. *E. lateralis*, Klug, ibidem, p. 34 (1842), ♂. — **Pl. 2, Fig. 37.** South Brazil.
10. *E. maculipennis*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 243 (1839), ♂. South Brazil.
    Thynnus ornatus, Klug, Physik. Abhand. Akad. Wiss. Berlin, 1840, p. 29 (1842), ♀.
11. *E. pictus*, Klug, ibidem, p. 29 (1842), ♀. South Brazil.
12. *E. puniceus*, Fox, Proc. Acad. Nat. Sc. Philad Vol. 50, p. 74 (1898). ♂. Central Brazil.
13. *E. quadricinctus*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 36 (1842), ♂. South Brazil.
14. *E. sphegeus*, Klug, ibidem, p. 35 (1842), ♂. South Brazil.
15. *E. varius*, Perty, Delect. Anim. artic. Brasil, p. 138 (1833), ♀. South Brazil.
16. *E.* ? *analis*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 27 (1842), ♂. South Brazil.
17. *E.* ? *brunnea*, Fox, Proc. Acad. Nat. Sc. Philad. Vol. 50, p. 73 (1898), ♀. Central Brazil.
18. *E.* ? *intermedius*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 30 (1842), ♀. South Brasil.
19. *E.* ? *philanthoides*, Klug, ibidem, p. 40 (1842), ♂. South Brazil.
20. *E.* ? *scutellaris*, Klug, ibidem, p. 40 (1842), ♂. South Brazil.
21. *E.* ? *versicolor*, Klug, ibidem, p. 34 (1842), ♂. Brazil.

13. Genus AMBLYSOMA, Westwood

Amblysoma. Westwood, Mag. Zool. Vol. 11 (1841).

Characters. — *Male.* — « Insectum sub hoc nomine hic depingo ad ordinem *Hymenopterorum* et subfamiliam *Thynnidarum* etiam pertinens, *Scotaenae*, Klug, affinis, at subgenus peculiare evidenter constituens. Abdomine parvo, segmentis continuis distinctum, caput mediocre; antennæ ♂ vix thoracis longitudine, 13 articulatæ, articulo secundo parvo, at distincto, articulis ultimis paullo gracilioribus et subcurvatis. Thorax oblongo-ovatus, tegulis magnis; metathorax postice rotundatus. Alæ magnæ, venis omnino ut in *Anodontyra* dispositis, cellula prima cubitali in duas partes appendiculo abbreviato subdivisa. Pedes longi, tarsorum unguibus subtus ante apicem dente armatis. Abdomen ovale, thorace minus, segmentis continuis, apice inermi. ♂.

» Observation. — Partes oris deterritæ nisi mandibulæ elongatæ fere rectæ, apice subobtusæ, dente maximo truncato interno ante apicem armatæ ».

I only know this genus by the description.

Type of the genus : *A. latreillei*, Westwood.

Geographical distribution of species. — South Brazil. Only one species has been described.

1. *A. latreillei*, Westwood, Mag. Zool. Vol. 11 (1841). South Brazil.

14. Genus ARIPHRON, Erichson

Ariphron. Erichson, Arch. f. Naturg. Vol. 8, p. 264 (1842).

Characters. — *Female.* — Head subrectangular, broader than long, almost flat, large and very much broader than the pronotum. Eyes small and round, removed by a distance equal to their own diameter from the base of the mandibles. The mandibles simple, not bidentate; maxillary palpi (according to Erichson) six-jointed. Pronotum as long as broad, deeply excavated on each side; the scutellum small, the mesopleuræ very prominent anteriorly and reaching the level of the scutellum on each side. Median segment widened posteriorly, usually as long as the pronotum. Abdomen broader than the thorax, the second dorsal segment either not differentiated in sculpture from the others or rugulose; the first ventral segment rather deeply separated from the second, the fifth ventral segment punctured, the fifth dorsal segment deeply emarginate at the apex. Pygidium not truncate, the sixth dorsal segment shorter than the hypopygium and subtruncate or feebly bilobed at the apex. The anterior tibiæ are more or less abnormal, subtuberculate or excised; the spines of the intermediate tibiæ very small and slender and of unequal length. Tarsal ungues simple, but broadened at the base, the anterior pair sometimes bluntly toothed.

Male. — Clypeus narrowly produced and very narrowly truncate at the apex. Labrum very small, slender, much longer than broad and narrowly rounded at the apex. Labium rather short, not narrowed anteriorly, the labial palpi four-jointed, the basal joint much the longest; maxillary palpi six-jointed, the basal joint very short, the three apical joints very long and slender; the galea short, broadly rounded at the apex, the dividing line incomplete. Head not deeply concave beneath and without a fringe of long curled hairs on the sides. Antennæ longer than the thorax and median segment combined, the apical joints more or less arcuate. Abdomen fusiform, slender at the base, more or less flattened; the second segment slightly depressed at the base. Hypopygium tridentate, the two basal spines short, the apical one much longer. The claspers are long, broad at the base, but narrowed near the apex.

The species differ considerably in structure and the genus may have to be subdivided when more material is available. It is more nearly allied to *Tachynomyia* than to any other genus.

Type of the genus : *A. bicolor,* Erichson.

Geographical distribution of species. — Australia and Tasmania.

1. *A. bicolor*, Erichson, Arch. f. Naturg. Vol. 8, p. 264 (1842), ♀. — **Pl. 3, Fig. 65.** — Tasmania.
2. *A. blandulus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 273 (1907), ♂ ♀. — Victoria.
3. *A. excisus*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 135 (1909), ♀. — South Australia (?)
4. *A. hospes*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 272 (1907). ♂. — Australia.
5. *A. nudulus*, Turner, ibidem, p. 274 (1907), ♂. — New South Wales.
6. *A. pallidulus*, Turner, ibidem, p. 276 (1907), ♂. — North Queensland.
7. *A. petiolatus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 36 (1859), ♂. — **Pl. 1, Fig. 19.** — Victoria to Queensland.
8. *A. rigidulus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 274 (1907), ♂. — **Pl. 3, Fig. 64.** — Victoria.
9. *A. rixosus*, Smith, Descr. New Spec. Hym. p. 168 (1879), ♂. — South Australia.
10. *A. tryphonoides*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 34 (1859), ♂ ♀. — South Australia.
11. *A. vagulus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 271 (1907), ♂. — Victoria.

15. Genus TACHYNOMYIA, Guérin

Tachynomyia. Guérin, Mag. Zool. Vol. 12, p. 6 (1842) (nec Ashmead).
Pseudælurus. Ashmead, The Canad. Entom. Vol. 35, p. 99 (1903).
Ælurus. Westwood. Arcan. Ent. Vol. 2, p. 122 (1844) (nec Klug).

Characters. — *Female.* — Head subrectangular, usually strongly rounded at the posterior angles, much broader than long, slightly convex; the mandibles simple, not bidentate. Clypeus very short, with a median carina. Labrum transverse and ciliate; the labium short, broadened to the apex, the labial palpi four-jointed, the basal joint much the longest; maxillæ small, the maxillary palpi minute, two-jointed. Pronotum much narrower than the head, broader than long, not excavated. Median segment not very short, often as long as the pronotum. First abdominal segment with the apical margin raised and with a more or less distinct transverse groove in front of the apex; the second segment punctured or rugose, very rarely longitudinally striated, but never transversely carinated, transversely depressed at the base; the groove between the first and second ventral segments rathers strongly marked, the fifth ventral segment punctured. Pygidium simple, broad, and rounded at the apex, very rarely contracted at the base. Tarsal ungues bidentate, the inner tooth sometimes very short and blunt and situated near the base. Intermediate tarsi with two spines of about equal length at the apex.

Male. — Head strongly concave beneath, usually broadly emarginate posteriorly, the sides with a fringe of long, curved hairs. Clypeus rather narrowly produced and truncate at the apex. Labrum very small, long, extremely narrow posteriorly, gradually broadened anteriorly, the breadth on the anterior margin not equaling the length. Labium broad at the apex, with a tuft of very long hairs; labial palpi four-jointed, the first joint much the longest and in most of the species broadened at the apex and furnished with a tuft of very long hairs. Maxillary palpi six-jointed, the basal joint very short, the three apical joints slender and more or less elongate, the fourth joint the longest. The galea is broadly subtruncate at the apex, the dividing coriaceous line almost obsolete. Antennæ as long as the head, thorax and median segment combined or longer, the apical joints more or less arcuate. Pronotum narrower than the head; the abdomen fusiform, usually flattened and slender at the base, the segments very rarely slightly constricted, the second segment transversely depressed at the base. The groove between the first and second ventral segments is usually very deep and broad. Sixth dorsal segment normal, not produced into a flattened plate; the hypopygium very variable, but always with an apical spine, never with more than three spines.

The genus will probably have to be subdivided in the future, but the species form a natural group apart from any other.

Type of the genus : *T. abdominalis*, Guérin.

Geographical distribution of species. — Australia and the Austro-Malayan region.

1. *T. abdominalis,* Guérin, Mag. Zool. Vol. 12, p. 5 (1842), ♂. — **Pl. 1, Fig. 16.** Tasmania, Victoria.
   T. abdominalis, Turner, Proc. Linn. N. S. Wales. Vol. 32, p. 280 (1907), ♀.
2. *T. abstinens,* Turner, ibidem, p. 284 (1907), ♂. Victoria.
3. *T. adusta*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 43 (1859), ♀. South Eastern Australia.
   Ælurus pilosulus, Smith, ibidem, p. 56 (1859), ♂.
4. *T. agilis*, Smith, Trans. Ent. Soc. Lond. (3), Vol. 2 (5), p. 390 (1865), ♂. Western Australia.
5. *T. anthracina,* Smith, Descr. New Spec. Hym. p. 174 (1879), ♂ ♀: — **Pl. 3, Fig. 66, 67.** North Queensland.
6. *T. aurifrons,* Smith, Cat. Hym., Brit. Mus. Vol. 7, p. 55 (1859), ♂. Western Australia.

7. *T. barbata*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 57 (1859), ♂♀.	Victoria.
8. *T. basalis*, Smith, ibidem, p. 55 (1859), ♂.	Australia.
9. *T. comata*, Smith, Journ. Proc. Linn. Soc. Lond. Zool. Vol. 7, p. 27 (1863), ♂.	Waigiou.
10. *T. combusta*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 55 (1859), ♂.	South Queensland.
11. *T. concolor*, Turner, Proc. Linn. N. S. Wales, Vol. 32, p. 280 (1907), ♂.	Victoria.
12. *T. fascipennis*, Turner, ibidem, p. 288 (1907), ♂♀.	North Queensland.
13. *T. fervens*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 58 (1859), ♂.	Victoria.
14. *T. flavopicta*, Ritsema, Ent. Mag. Vol. 12, p. 185 (1876), ♂.	Aru, Queensland.
T. flavopicta, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 289 (1907), ♀.	
15. *T. fragilis*, Smith, Journ. Proc. Linn. Soc. Lond. Zool. Vol. 8, p. 78 (1864), ♂.	Morty.
16. *T. imbellis*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 254 (1908), ♂.	Western Australia.
17. *T. insularis*, Smith, Journ. Proc. Linn. Soc. Lond. Zool Vol. 7, p. 26 (1863), ♀.	Mysol.
18. *T. megacephala*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 137 (1909), ♂.	North Queensland.
19. *T. moerens*, Westwood, Arcan. Ent. Vol. 2, p. 124 (1844), ♂.	Victoria, New South Wales.
T. moerens, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 286 (1907), ♀.	
20. *T. obliterata*, Turner, ibidem, p. 282 (1907), ♂.	South Australia.
21. *T. paradelpha*, Turner, ibidem, p. 281 (1907), ♂.	Victoria.
22. *T. punctata*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 44 (1859), ♀.	Victoria, South Australia.
Ælurus dentatus, Smith, ibidem, p. 57 (1859), ♂.	
23. *T. rubella*, Smith, ibidem, p. 56 (1859), ♂.	Victoria.
24. *T. seduloides*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 32, p. 283 (1907), ♂.	Victoria.
25. *T. senex*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 54 (1859), ♂. — **Pl. 1, Fig. 17, 18.**	Victoria.
26. *T. volatilis*, Smith, Trans. Ent. Soc. Lond. p. 237 (1868), ♂.	South Australia.
27. *T. vulpina*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 54 (1859), ♂.	Victoria, New South Wales.

16. Genus MEGALOTHYNNUS, nov. gen.

Thynnus. Auctorum.

Characters. — *Female.* — Clypeus with a low carina, not reaching the apex, the apical margin transverse. Mandibles stout, very strongly bearded on the outer margin. Front prominent and bituberculate between the antennæ, divided by a median sulca. Head scarcley broader than the pronotum, thick and very slightly convex. Eyes ovate, very near the base of the mandibles; ocelli absent. Pronotum broader than long; the mesopleuræ deeply grooved for the reception of the intermediate femora and produced upwards into two tubercles on each side of and level with the scutellum. Median segment rather short, broadened and obliquely truncate posteriorly. Abdomen very large, the second segment coarsely transversely rugose; the pygidium vertically truncate posteriorly, the face of the truncation very broadly ovate, with arched striæ; no constriction at the base of the truncation. Fifth ventral segment transversely rugose-striate; a shallow groove between the two basal ventral segments. Posterior trochanters subtuberculate at the apex; the posterior femora with a flattened triangular process in the middle beneath, the rounded process at the apex of the femora strongly developed, intermediate tibiæ with two spurs of unequal length, the spur near the apex of the anterior tibiæ flattened and long, as long as the three basal joints of the tarsi. Of large size.

Male. — Head concave beneath, the mandibles with a very long fringe of hairs. Clypeus convex, truncate or broadly emarginate at the apex. Antennæ as long as the thorax and median segment

combined, slender at the extreme apex, the scape scarcely longer than the second joint of the flagellum. Scutellum depressed in the middle. Median segment oblique from a little behind the postscutellum and closely covered with long pubescence. Abdomen elongate, slightly narrowed at the extremities, the transverse groove between the two basal ventral segments deep; the segments not constricted. Seventh dorsal segment broadly truncate at the apex, not produced into a flat plate, very coarsely sculptured. Hypopygium terminating in a strongly recurved process, which is not very narrow and is truncate at the apex. Posterior femora produced broadly in the middle beneath and subtuberculate, strongly produced at the apex beneath. Posterior trochanters produced at the apex and spined or subtuberculate. The basal joint of the posterior tarsi as long as the tibiæ or longer.

Type of the genus : *M. klugii*, Westwood.

Geographical distribution of species. — South Western Australia. Only two species are known.

1. *M. klugii*, Westwood, Arcan. Ent. Vol. 2, p. 140 (1844), ♂. Western Australia.
   Thynnus gravidus, Westwood, ibidem, p. 141 (1844), ♀.
2. *M. poultoni*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 197 (1908), ♂; ibidem, p. 196 (1908), ♀ (as *klugii*, ♀.). — Pl. 2, Fg. 46. Western Australia.

17. Genus ONCORHINUS, Shuckard

Oncorhinus. Shuckard, in Grey, Journ. Exped. W. Austral. Vol. 2, p. 471 (1841).

Characters. — *Male.* — Mandibles bidentate; the clypeus large, moderately convex, very broadly emarginate at the apex. Labrum projecting slightly beyond the clypeus; rounded at the apex, strongly narrowed posteriorly. Maxillary palpi six-jointed, the joints of about equal length; the labial palpi four-jointed. Head short and broad, much broader than the pronotum; the antennæ widely separated at the base, stout and long, longer than the head, thorax and median segment combined, of almost equal thickness throughout. Median segment short and broad, oblique posteriorly and rounded at the sides. Abdomen a little longer than the head, thorax and median segment combined, slightly narrowed at the extremities, the segments very feebly constricted at the base and concave beneath. The groove between the two basal ventral segments is rather shallow. Seventh dorsal segment broadly truncate at the apex, produced shortly near the base into a flattened, triangular, striated plate. Hypopygium produced a little beyond the dorsal segment, the sides parallel, broadly and deeply emarginate at the apex, the angles produced into spines. The second recurrent nervure is interstitial with the second transverse cubital nervure.

Female unknown.

Type of the genus : *O. xanthospilus*, Shuckard.

Geographical distribution of species. — South Western Australia. Only one species is known.

1. *O. xanthospilus*, Shuckard, in Grey, Journ. Exped. W. Austral. Vol. 2, p. 471 (1841), ♂. — Pl. 3, Fig. 74. South Western Australia.

18. Genus PSAMMOTHYNNUS, Ashmead

Psammothynnus. Ashmead, The Canad. Entom. Vol. 35, p. 102 (1903).

Characters. — *Female.* — Head and thorax coarsely punctured; the head subquadrate, rounded

at the posterior angles, the clypeus with a carina. Pronotum rectangular, broader than long and longer than the median segment, the scutellum much narrower than the pronotum; the median segment broadened from the base, obliquely truncate posteriorly. First abdominal segment with a transverse groove before the apex; the second segment with a thickened transverse carina before the apex, sometimes with one or two other carinæ less raised near the base. Pygidium not compressed, much longer than broad, deflexed, narrow at the base and broadened towards the apex; the surface smooth, with a longitudinal carina and the margins slightly raised; rounded at the apex. A transverse groove between the two basal ventral segments; the fifth ventral segment punctured.

Male. — Clypeus narrowly produced and truncate at the apex, with a carina from the base. Maxillary palpi rather stout, the fourth and sixth joints rather longer than the others; the labial palpi four-jointed. Head rather small, the antennæ as long as the head, thorax and median segment combined, the apical joints strongly arcuate. Abdomen flattened, elongate fusiform. Hypopygium very short, not projecting beyond the dorsal segment, strongly emarginate at the apex, the angles produced into spines with a few setæ at the extremity; the seventh dorsal segment trilobed or subtruncate at the apex, the lateral angles with long setæ. The two basal ventral segments divided by a very shallow groove. The second recurrent is received very near the base of the third cubital cell.

Type of the genus : *P. depressus*, Westwood.

Geographical distribution of species. — Australia (the southern half) and Tasmania.

1. *P. depressus,* Westwood, Arcan. Ent. Vol 2, p. 107 (1844), ♂ ♀. Western Australia.
2. *P. fulvopilosus,* Smith, Descr. New Spec. Hym. p. 160 (1879), ♂ ♀. South Australia.
3. *P.* ? *trisulcatus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 45 (1859), ♀. South Eastern Australia.

19. Genus PHYMATOTHYNNUS, Turner

Thynnus, subgenus **Phymatothynnus.** Turner, Proc. Linn. Soc. N .S .Wales, Vol. 33, p. 93 (1908).

Characters. — *Female.* — Mandibles falcate. Head variable in shape, subrectangular, with a short, longitudinal frontal sulcus, the front usually produced into a small tubercle on each side above the base of the antennæ. Antennæ curved and stout, the joints broader than long, the apical joint longer. Pronotum narrower than the head, subrectangular, as long as broad or longer, sometimes with shallow depressions near the posterior angles. First abdominal segment with a transverse groove before the apex; the second transversely rugose, with a transverse carina close to the base and the apical margin raised. Fifth ventral segment punctured. Pygidium not contracted or truncate, rounded at the apex, with a low longitudinal carina from the base. Tarsal ungues bidentate.

Male. — Clypeus short, rather narrowly produced and truncate at the apex. Labrum very short, the apical margin straight and ciliate, narrowed posteriorly. Labium with a few very long recurved hairs at the apex; the labial palpi stout, four-jointed, the basal joint as long as the second and third combined. Maxillæ short, the galea rounded at the apex, the dividing line distinct; maxillary palpi six-jointed, the basal joint very short, the others subequal. Antennæ as long as the head, thorax and median segment combined or longer, the six apical joints very strongly arcuate. Median segment rounded. Abdomen elongate-fusiform, the basal segments rather feebly depressed at the base. Hypopygium rather narrow, the sides almost parallel, longer than broad, truncate or conical at the apex, with or without a short apical spine. The second recurrent nervure is received at about one quarter from the base of the third cubital cell.

Most nearly allied to *Psammothynnus*, Ashmead.

Type of the genus : *P. monilicornis*, Smith.

Geographical distribution of species. — Southern Australia and Tasmania.

1. *P. aratus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 94 (1908). ♂ ♀. Victoria.
2. *P. monilicornis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 39 (1859), ♂ ♀. South Eastern Australia.
3. *P. ? distinctus*, Guerin, Mag. Zool. Vol. 12, p. 12 (1842), ♂. Australia.
4. *P. ? nitidus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 30 (1859), ♂. South and West. Australia.

20. Genus GLAPHYROTHYNNUS, nov. gen.

Zeleboria. Saussure (pars), Reise Novara, Zool. Vol. 2, Hym. p. 131 (1867); Ashmead, The Canad. Entom. Vol. 35, p. 102 (1903).

Thynnus, subgenus **Glaphyrothynnus.** Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 108 (1908).

Saussure having taken *Z. sexmaculata*, Smith, as the first section of his genus *Zeleboria*, I prefer to take that species as the type of his genus, though as he mentions *Z. carinata* in his remarks in the description of the genus there is some doubt as to which group the name should be used for.

Characters. — *Female.* — Head much broader than long; the mandibles falcate; clypeus without a carina. Pronotum short, rectangular, nearly twice as broad as long, without a sulcus or carina. Median segment short and obliquely truncate posteriorly. First abdominal segment broadly depressed at the apex; second segment with three strongly raised transverse carinæ; the third and fourth segments depressed at the apex, with a raised curved mark on each side. Fifth ventral segment punctured. Pygidium truncate posteriorly, almost vertical, variable in breadth, sometimes slightly recurved at the apex; the sixth dorsal segment nearly or quite reaching the apex of the hypopygium. Tarsal ungues simple, dilated at the base.

Male. — Clypeus large, convex, with a low longitudinal carina, broadly truncate at the apex, the labrum projecting. Labrum crescentic, subtruncate posteriorly and borne on a short narrow petiole, the apical margin depressed and broadly membranous. Maxillæ very broad, with a fringe of long hairs on the outer margin at the base; maxillary palpi slender, six-jointed, the joints nearly equal in length. Labium long and narrow, the labial palpi four-jointed, the two basal joints the longest. Antennæ about equal in length to the thorax and median segment combined, the joints not arcuate. Abdomen elongate fusiform, flattened, the hypopygium short, narrowly produced and deeply emarginate, truncate or rounded at the apex.

In one or two species, the females of which are unknown, there is a tubercle at the apex of the posterior trochanters.

Type of the genus : *G. xanthorrhoei*, Smith.

Geographical distribution of species. — Australia.

1. *G. carinatus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 29 (1859), ♂. Eastern Australia.
   G. carinatus, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 131 (1867), ♀.
2. *G. contiguus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 109 (1908), ♂. New South Wales.
3. *G. flavescens*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 68 (1859), ♂ ♀. — **Pl. 2, Fig. 38, 39.** South Australia.
4. *G. fusiformis*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 132 (1867), ♂. Western Australia.
5. *G. marginalis*, Westwood, Arcan. Ent. Vol. 2, p. 120 (1844), ♂. Western Australia.
   G. marginalis, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 110 (1908), ♀.
6. *G. sedulus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 35 (1859), ♂. Western Australia.

7. *G. sitiens*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 112 (1898), ♂. Western Australia.
8. *G. trifidus*, Westwood, Arcan. Ent. Vol. 2, p. 119 (1844), ♂. Western Australia.
9. *G. xanthorrhoei*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 28 (1859), ♂. Eastern Australia.
— **Pl. 4, Fig. 77, 78.**
Thynnus planifrons, Smith, ibidem, p. 46 (1859), ♀.

21. Genus AULACOTHYNNUS, nov. gen.

Thynnus (pars). Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 40 (1859).
Thynnus, subgenus **Zeleboria** (pars). Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 105 (1908).

Characters. — *Female.* — Head shining, broader than long and rounded posteriorly. Pronotum much longer than broad, the anterior angles not tuberculate, a longitudinal sulcus extending from the anterior margin to beyond the middle. First abdominal segment broadly transversely depressed at the apex, the second segment with two strongly raised transverse carinæ. Pygidium not constricted or truncate, nearly twice as long as broad, with a broad longitudinal carina.

Male. — Clypeus narrowly truncate at the apex. Antennæ a little longer than the head, thorax and median segment combined, the apical joints slightly arcuate Median segment rather long. Abdomen elongate, tapering slightly at the extremities; the hypopygium with an apical spine. Posterior femora with a large triangular tubercle on the inner margin. The claspers are long, very narrow and pointed.

Closely allied to *Zeleboria*.

Type of the genus : *A. femoratus*, Turner.

Geographical distribution of species. — South Eastern Australia.

1. *A. calcaratus*, Smith, Cat Hym. Brit. Mus. Vol. 7, p. 40 (1859), ♂. Victoria.
2. *A. femoratus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 105 (1908), ♂♀. New South Wales.

22. Genus ZELEBORIA, Saussure

Zeleboria (Sect. 1). Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 131 (1867).

I prefer to use this name for Saussure's first section, rather than for his second section as is done by Ashmead.

Characters. — *Female.* — Clypeus strongly convex in the middle; the head broader than long, more or less narrowed posteriorly, with a short frontal sulcus. Pronotum with a short but deep longitudinal sulcus from the middle of the anterior margin, the anterior angles acute and often subtuberculate. First abdominal segment rather narrowly transversely depressed on the apical margin; the second segment with three or four transverse carinæ, excluding the raised apical margin; pygidium broad, deflexed, not truncate or compressed, rounded at the apex, with a low, median, longitudinal carina. Fifth ventral segment punctured. Tarsal ungues bidentate.

Male. — Clypeus rather narrowly produced and truncate at the apex; the labial palpi four-jointed, the basal joint long, longer than the third and fourth combined, the apical joint thickened; maxillary palpi long, the basal joint very short, the fourth joint the longest. Labrum very short, much broader than long, narrowed posteriorly, the anterior margin straight. Antennæ rather longer than the head,

thorax and median segment combined, the apical joints arcuate. Median segment rather slender much longer than broad. Abdomen flattened, subpetiolate, elongate fusiform, the segments not constricted, smooth and shining. Hypopygium produced, longer than broad, rounded or narrowly truncate at the apex, usually armed with a short apical spine. The second recurrent nervure is received at about one-quarter from the base of the third cubital cell.

Some of the species assigned with doubt to this group differ slightly in the length of the male antennæ and palpi and in the number of carinæ on the second segment and in the shape of the pygidium of the female, but are more conveniently placed here for the present.

Type of the genus : *Z. sexmaculata*, Smith.

Geographical distribution of species. — Australia.

1. *Z. ada*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 102 (1908), ♂.	North West Australia.
2. *Z. cryptoides*, Smith, Cat. Hym. Brit Mus. Vol. 7, p. 33 (1859), ♂. *Z. cryptoides*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 102 (1908), ♀.	Victoria, New South Wales.
3. *Z. impatiens*, Smith, Descr. New Spec. Hym. p. 168 (1879), ♂.	Western Australia.
4. *Z. laevifrons*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 45 (1859), ♀, (?*sexmaculata* ♀).	South Eastern Australia.
5. *Z. longicornis*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 108 (1908), ♂.	North West Australia.
6. *Z. monticola*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 138 (1909), ♂.	Victoria.
7. *Z. nitidula*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 101 (1908), ♂♀. — **Pl. 4, Fig. 75, 76.**	Victoria.
8. *Z. polita*, Turner, ibidem, p. 104 (1908), ♂♀.	New South Wales.
9. *Z. sexmaculata*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 32 (1859), ♂.	South Eastern Australia.
10. *Z. trivialis*, Smith, ibidem, p. 38 (1859), ♂♀.	South Australia.
11. Z. *volatilis*, Smith, ibidem, p. 33 (1859), ♂	South Australia.
12. Z. ?*proxima*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 99 (1908), ♂♀.	New South Wales.
13. *Z.* ?*sodalis*, Turner, ibidem, p. 122 (1908), ♂.	South Australia.

23. Genus AGRIOMYIA, Guérin

Agriomyia. Guerin, in Duperrey, Voy. Coquille, Zool. Vol. 2, p 213 (1839).
Cephalothynnus. Ashmead, The Canad. Entom Vol. 35, p. 100 (1903).

Characters. — *Female.* — Head large and very flat, always broader than long; a short longitudinal sulcus between the antennæ; the clypeus without a carina, the mandibles simple. Labial palpi two-jointed, maxillary palpi four-jointed. Pronotum broader than long, with a short longitudinal sulcus from the middle of the anterior margin, usually flattened, more rarely raised and subtuberculate anteriorly. First abdominal segment broadly depressed before the apical margin; the second segment with four transverse carinæ in addition to the raised apical margin; the third and fourth segments depressed on the apical margin, most broadly in the middle. Pygidium very narrow at the base, strongly compressed, deflexed posteriorly with a narrow elongate ovate surface. Fifth ventral segment rather coarsely punctured. Tarsal ungues bidentate.

Male. — Head rounded; the clypeus narrowly produced and truncate at the apex; the labrum narrow, much longer than broad and very strongly bilobed anteriorly. Labium rather long, broadened anteriorly, the labial palpi four-jointed. Maxillary palpi six-jointed, the three apical joints slender and

longer than the others; the maxillæ smooth. Antennæ about as long as the head and median segment combined, of even thickness throughout. Median segment oblique, rounded at the sides. Abdomen fusiform; the first segment rather broad, deeply separated beneath from the second segment and armed on the ventral surface with an almost vertical median tubercle. Hypopygium without basal spines, rounded or subtriangular, with a short apical spine. The second recurrent nervure is received rather near to the base of the third cubital cell.

Type of the genus : *A. maculata*, Guérin.

Geographical distribution of species. — Australia and Tasmania.

1. *A. adelaidae*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 164 (1908), ♂ (♀ ?). — South Australia.
2. *A. albomaculata*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 27 (1859), ♂. — South Australia.
3. *A. albopicta*, Smith, ibidem, p. 26 (1859), ♂. — Western Australia.
4. *A. attenuata*, Smith, ibidem, p. 42 (1859), ♀. — Australia (South Eastern ?).
5. *A. cingulata*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 160 (1908), ♂. — Western Australia.
6. *A. irregularis*, Smith, Descr. New Spec. Hym. p. 162 (1879), ♂. — Western Australia.
7. *A. jucunda*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 25 (1859), ♂. — North West Australia.
8. *A. luctuosa*, Smith, ibidem, p. 26 (1859), ♂. — **Pl. 4, Fig. 84, 85.** — New South Wales.
   Thynnus compressus, Smith, ibidem, p. 43 (1859), ♀.
9. *A. maculata*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 218 (1839), ♂. — South Australia.
   var. odyneroides, Westwood, Arcan. Ent. Vol. 2, p. 199 (1844), ♂ ♀. — Tasmania, Victoria.
   var. variegatus, Klug, Physik. Abhandl. Akad. Wiss. Berl. 1840, p. 20 (1842), ♂. — New South Wales.
   — Pl. 1, Fig. 21, 22.
10. *A. marginilabris*, Guérin, Mag. Zool. Vol. 12, p. 3 (1842), ♂. — South Eastern Australia.
    A. marginilabris, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 161 (1908), ♀.
11. *A. media*, Smith, Descr. New Spec. Hym. p. 170 (1879), ♂. — South Australia.
    A. media, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 158 (1908), ♀.
    var. breweri, Turner, ibidem, p. 158 (1908), ♂. — Western Australia.
12. *A. molesta*, Smith, Descr. New Spec. Hym. p. 166 (1879), ♂. — South Australia.
13. *A. rotundiceps*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 46 (1859), ♀. — **Pl. 2, Fig. 40.** — Eastern Australia.
    A. rotundiceps, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 159 (1908), ♂.
14. *A. rubella*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 25 (1859), ♂. — South Eastern Australia.
15. *A. suspiciosa*, Smith, Descr. New Spec. Hym. p. 161 (1879), ♂. — Western Australia.
16. *A. trochanterina*, Westwood, Arcan, Ent. Vol. 2, p. 116 (1844), ♂. — South Eastern Australia.
17. *A. vivida*, Smith, Descr. New Spec. Hym. p. 161 (1879), ♂. — Western Australia.
18. *A.* ? *taeniolata*, Froggatt, Trans. Roy. Soc. S. Austral. Vol. 16, p. 71 (1893), ♂. — Central Australia.

24. Genus ASTHENOTHYNNUS, nov. gen.

Thynnus, Auctorum (pars).

Thynnus, subgenus **Æolothynnus**. Turner (pars), Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 115 (1908).

Characters. — *Female* — Mandibles simple Head very variable in shape, smooth and shining, with a very short longitudinal sulcus between the antennæ, never excavated, usually as long or longer than broad. Pronotum variable in shape, always narrower than the head, usually with a short longitudinal sulcus from the middle of the anterior margin, the anterior angles not tuberculate. Scutellum longer than broad, narrowed and rounded posteriorly. First abdominal segment broadly depressed at the apex,

the raised portion before the depression more or less bilobed posteriorly; the second segment with four, or more rarely three, transverse carinæ, excluding the raised apical margin. Fifth ventral segment punctured. Pygidium deflexed, narrow and elongate, slightly widened to the apex. Tarsal ungues simple.

Male. — Clypeus short, narrowly produced and truncate at the apex; the labrum short, subtriangular, rather broader than longer, the anterior margin straight and ciliate. Labium broadened anteriorly, with long sparse hairs, the labial palpi stout, four-jointed, the basal joint rather longer than the others. Maxillary palpi rather stout, six-jointed, the basal joint very short, the apical joint the longest; the galea broadly rounded at the apex. Antennæ not as long as the head, thorax and median segment combined, the apical joints very feebly arcuate. Head broader than the pronotum, usually with a dark ferruginous spot on each side on the vertex. Median segment rounded, as broad at the base as long. Abdomen fusiform or elongate fusiform, flattened, the segments not (or if at all very slightly) constricted. Hypopygium rather variable in shape, usually longer than broad, truncate at the apex, with a short apical spine; but in some species it is broad and rounded, and in others the apical spine is absent. The second recurrent nervure is received rather near the base of the third cubital cell.

Very few of the species are known in both sexes, and doubtless further division will be required when more material is available. The genus includes some of the smallest of the family.

Type of the genus : *A. pulchellus*, Klug.

Geographical distribution of species. — Australia and Tasmania.

1. *A. beatrix*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 120 (1908), ♂ ♀.	New South Wales.
2. *A. decoratus*, Smith, Descr. New Spec. Hym. p. 159 (1879), ♂.	South Australia.
3. *A. generosus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p 119 (1908), ♂ ♀.	South Australia.
4. *A. innocuus*, Turner, ibidem, p. 118 (1908), ♂.	Western Australia.
5. *A. minutus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 35 (1859), ♂.	North West Australia.
6. *A. penetratus*, Smith, Descr. New Spec. Hym. p. 158 (1879), ♂.	Western Australia.
7. *A. pulchellus*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 20 (1842), ♂. *A. pulchellus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 115 (1908), ♀.	New South Wales.
8. *A. pulcherrimus*, Turner, ibidem, p. 115 (1908), ♂ ♀.	New South Wales.
9. *A. pygmaeus*, Turner, p. 117 (1908), ♂.	Victoria.
10. *A. rubromaculatus*, Turner, ibidem, p. 118 (1908), ♂.	Victoria, New South Wales.
11. *A. tenuis*, Turner, ibidem, p. 117 (1908), ♂.	North Queensland.
12. *A. westwoodii*, Guérin, Mag. Zool. p. 4 (1842), ♂. *Thynnus longiceps*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 46 (1859), ♀.	Tasmania to New South Wales.
13. *A.* ? *incensus*, Smith, Trans. Ent. Soc. Lond. p. 236 (1868), ♂.	Western Australia.
14. *A.* ? *leucostictus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 107 (1908). ♀.	New South Wales.
15. *A.* ? *planiventris*, Turner, ibidem, p. 121 (1908), ♂.	Western Australia.
16. *A.* ? *quadricarinatus*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 124 (1867). ♀.	New South Wales.

25. GENUS LEIOTHYNNUS, NOV. GEN.

Thynnus, subgenus **Æolothynnus** (pars). Turner.

Characters. — *Female.* — Mandibles falcate; the clypeus without a carina; a short longitudinal sulcus between the antennæ. Pronotum subrectangular, broader than long, with a longitudinal sulcus

from the middle of the anterior margin. Median segment much shorter than the pronotum, narrow at the base and obliquely truncate posteriorly. First abdominal segment broadly depressed at the apex; the second segment with three strong transverse carinæ, not including the recurved apical margin. Fifth ventral segment punctured; the sides of the abdomen with long sparse pubescence near the apex. Pygidium deflexed, ovate, the sixth dorsal segment narrow, and not nearly reaching the apex of the hypopygium, with a fringe of golden hairs on each side of it. Tarsal ungues very feebly bidentate.

Male. — Mandibles bidentate; the clypeus produced and rather broadly truncate at the apex, much broader than long; the labrum slightly exposed, short and subtriangular, broader than long. Maxillary palpi six-jointed, the joints nearly equal in length, except the very short basal joint. Labial palpi four-jointed, the joints of almost equal length; the labium rather narrow, with sparse long hairs. Antennæ about as long as the thorax and median segment combined, of almost even thickness throughout, the apical joints not arcuate. Abdomen elongate, subpetiolate, flattened, the first segment with a sulcus from the base. Hypopygium small, broadly rounded or subtruncate at the apex, with an apical spine. Second recurrent nervure received near the base of the third cubital cell.

The genus is near *Asthenothynnus* but is, I think, sufficiently distinguished by the difference in the tarsal ungues and pygidium of the female, and the clypeus, antennæ and palpi of the male.

Type of the genus : *L. mackayensis*, Turner.

Geographical distribution of species. — Australia.

1. *L. mackayensis*, Turner, Proc. Linn. Soc. N. Wales, Vol. 33, p. 123 (1908), ♂ ♀. North Queensland.

26. Genus ASPIDOTHYNNUS, nov. gen.

Characters. — *Male.* — Clypeus large and long, broadly produced and truncate at the apex; the labrum very prominent, rounded at the apex. Maxillæ smooth, without long hairs; the galea rounded at the apex; the maxillary palpi six-jointed, the joints subequal, except the basal joint, which is short. Labial palpi four-jointed. Antennæ about as long as the thorax and median segment combined, of even thickness throughout. Scutellum convex; the median segment rounded. Abdomen fusiform, the segments very feebly constricted at the base; the hypopygium broad, not very prominent, without basal spines, rounded or truncate at the apex with an acute apical spine. Sixth ventral segment without a spine at the apical angles. Second recurrent nervure received near the base of the third cubital cell; the third cubital cell shorter than the second on the radial nervure.

Female unknown.

Type of the genus : *A. combustus*, Smith.

Geographical distribution of species. — South Australia and Victoria.

1. *A. combustus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 32 (1859), ♂. South Australia.
2. *A. polybioides*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 124, (1908), ♂. South Australia.
3. *A. rostratus*, Turner, ibidem, p. 134 (1908), ♂. Victoria.

27. Genus GYMNOTHYNNUS, nov. gen.

Characters. — *Female.* — Head broader than long, narrowed posteriorly; the mandibles falcate. Pronotum subrectangular, broader than long, flattened and almost smooth, without a carina.

Median segment much shorter than the pronotum, almost vertically truncate posteriorly. First abdominal segment with a transverse groove before the apex; the second segment with four strong transverse carinæ including the raised apical margin; the pygidium not very long, narrowly ovate, with a strong, longitudinal, median carina, the margins strongly elevated. Tarsal ungues very feebly bidentate.

Male. — Clypeus large, vertical, triangular, the apical margin straight and truncate. Antennæ very short, no longer than the thorax, of almost equal thickness throughout, the pronotum nearly as broad as the head, the mesonotum much broader than long; the median segment about equal in length to the scutellum and vertically truncate posteriorly. Abdomen fusiform, no longer than the thorax and median segment combined, the segments constricted at the base; the first ventral segment very deeply separated from the second; the sixth ventral segment without a spine at the apical angles. Hypopygium short, ending in a rather long spine, which is broadened at the base, with a very small spine on each side. The second recurrent nervure is received near the base of the third cubital cell, which is as long as the second on the radial nervure. The division of the first cubital cell is marked by a scar only.

The genus is allied to *Epactiothynnus,* but the clypeus and antennæ of the male are very different and the pronotum of the female is without a carina or tubercule and the pygidium is shorter and broader.

Type of the genus : *G. gilberti,* Turner.

Geographical distribution of species. — North Australia.

1. *G. gilberti,* Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 153 Port Darwin. (1908), ♂ ♀. — **Pl. 2, Fig. 43.**

28. Genus EPACTIOTHYNNUS, nov. gen.

Characters. — *Female.* — Mandibles simple, the head very variable in shape. Pronotum always with a longitudinal carina or tubercle. First abdominal segment depressed at the apex, the raised portion before the depression straight or very feebly emarginate posteriorly; the second segment with four or five transverse carinæ, including the raised apical margin; the fifth ventral segment punctured. Pygidium with marginal carinæ, oblique posteriorly, narrow, broadening slightly towards the apex, broader and less compressed than in the genus *Æolothynnus.* Tarsal ungues bidentate, the posterior pair most feebly so.

Male. — Mandibles bidentate, the inner tooth short. Clypeus variable, truucate at the apex; the labrum broader than long, strongly narrowed posteriorly, the apical margin almost straight. Maxillary palpi six-jointed, the basal joint very short; labium rather long, the labial palpi four-jointed; the maxillæ strongly bearded on the outer margin. Antennæ scarcely as long as the thorax and median segment combined, of almost equal thickness throughout. Median segment rounded; the abdomen elongate or elongate fusiform, the segments not strongly constricted if at all. Seventh dorsal segment deflexed; the hypopygium ending in a long spine which is broad at the base, with a smaller spine on each side at the base of the median spine. First ventral segment separated from the second by a moderately deep groove; the sixth ventral segment without spines at the apical angles. The second recurrent nervure is received close to the base of the third cubital cell.

Type of the genus : *E. opaciventris,* Turner.

Geographical distribution of species. — Australia and the Austro-Malayan region.

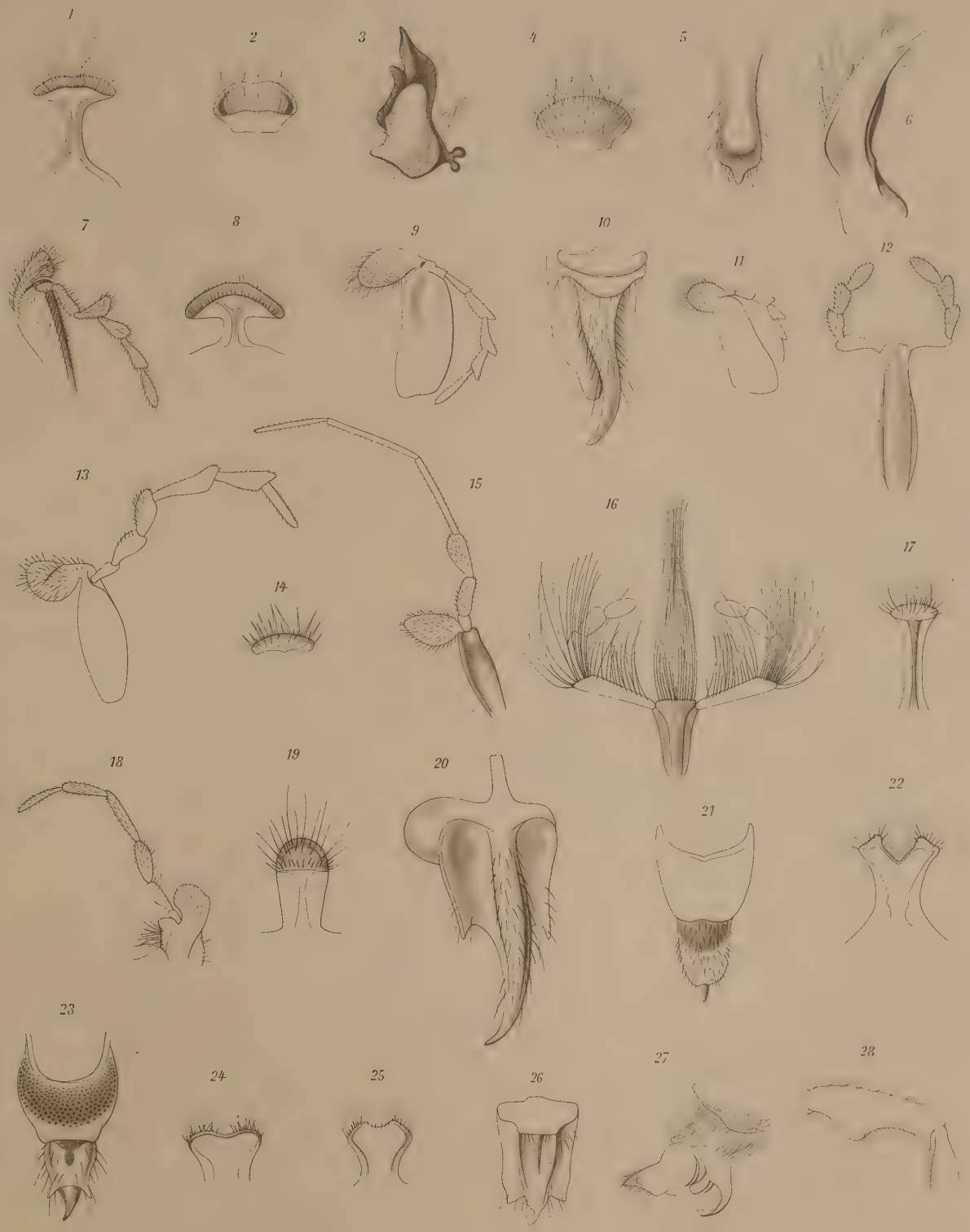
1. *E. abductor,* Smith, Proc. Linn. Soc. Lond. Zool. Vol. 8, p. 78 (1864), ♂. New Guinea.

2. *E. bembeculus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 126 (1908), ♂. — North Queensland.
3. *E. bipartitus*, Turner, ibidem, p. 139 (1908), ♂ ♀. — North Queensland.
4. *E. coloratus*, Turner, ibidem, p. 128 (1908), ♂ ♀. — North Queensland.
5. *E. conjungens*, Turner, ibidem, p. 130 (1908), ♂ ♀. — North Queensland.
6. *E. crabroniformis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 37 (1859), ♂. — Australia.
7. *E. cygnorum*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 141 (1908), ♂. — Western Australia.
8. *E. excellens*, Smith, Descr. New Spec. Hym. p. 163 (1879), ♂. — Western Australia.
9. *E. excelsus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 36 (1908), ♂. — Port Darwin.
10. *E. jardinei*, Turner, ibidem, p. 126 (1908), ♂. — North Queensland.
11. *E. laevissimus*, Smith, Journ. Proc. Linn. Soc. Lond. Zool. Vol. 8, p. 77 (1864), ♀. — New Guinea.
12. *E. opaciventris*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 138 (1908), ♂ ♀. — **Pl. I, Fig. 23, 24; Pl. 4, Fig. 79, 80.** — North Queensland.
13. *E. productus*, Turner, ibidem, p. 127 (1908), ♂. — Western Australia.
14. *E. quadratus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 42 (1859), ♀. — Western Australia.
15. *E. tasmaniensis*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 119 (1867), ♂ — Tasmania.
    E. tasmaniensis, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 129 (1908), ♀.
16. *E. vagans*, Smith, Proc. Linn. Soc. Lond. Zool. Vol. 6, p. 51 (1862), ♂; Proc. Zool. Soc. Lond. p. 83 (1877), ♀. — Halmaheira.
17. *E. ? arenicolus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 134 (1908), ♂, — Central Australia.
18. *E. ? pavidus*, Smith, Descr. New Spec. Hym. p. 166 (1879), ♂ ♀. — South Australia.
19. *E. ? tenuicornis*, Smith, Journ. Proc. Linn. Soc. Lond. Zool. Vol. 3, p. 151 (1858), ♂. — Aru.

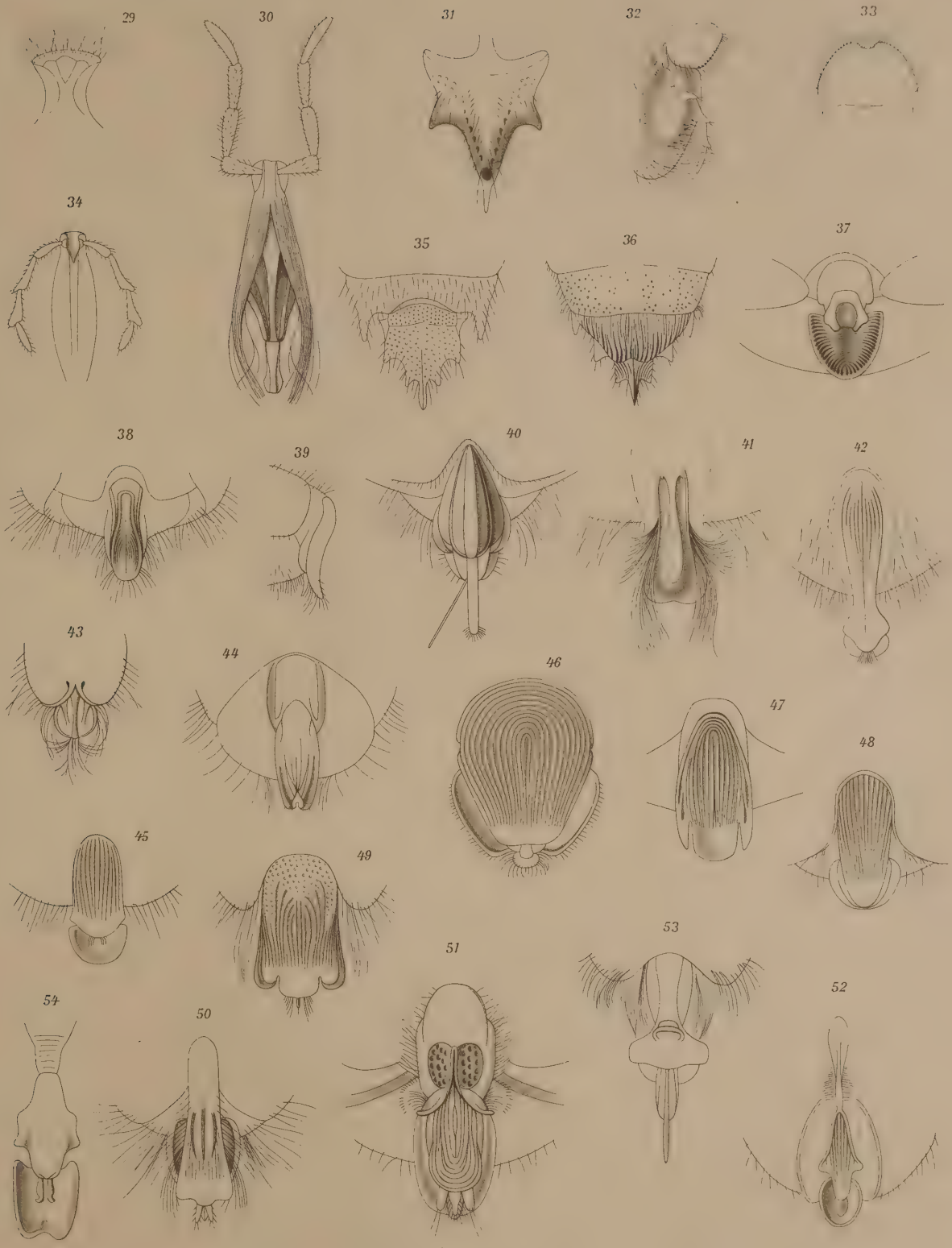
29. Genus TMESOTHYNNUS, nov. gen.

Characters. — *Female.* — Mandibles falcate; the clypeus without a carina; the head deeply longitudinally grooved on each side, with a longitudinal frontal sulcus, longer than broad. Pronotum longer than broad, with a longitudinal furrow on each side, leaving a very broad median carina. Median segment very short, but with a distinct dorsal surface. First abdominal segment with a broad transverse depression before the apical margin; the second segment with four transverse carinæ including the raised apical margin; the fifth ventral segment punctured. Pygidium constricted at the base, deflexed and margined by strongly raised carinæ, narrow and elongate ovate. Tarsal ungues very feebly bidentate.

Male. — Clypeus convex, produced and rather narrowly truncate at the apex; the labrum slightly prominent, bilobed, rather shallowly emarginate at the apex and strongly narrowed posteriorly. Maxillæ with a fringe of very long hairs on the outer margin; maxillary palpi six-jointed, the basal joint very short; labial palpi four-jointed, shorter than the labium. Antennæ as long as the thorax and median segment combined, of even thickness throughout. Median segment rounded; the abdomen elongate, the sides nearly parallel, tapering slightly at the extremities, the segments very strongly constricted at the base. Hypopygium truncate at the apex, with an acute apical spine. Claspers long and rather narrow. The sixth ventral segment without a spine at the apical angles. The anterior coxæ are rather shallowly concave beneath. Second recurrent nervure received close to the base of the second cubital cell.



FAM. THYNNIDÆ.



FAM. THYNNIDÆ.

The genus is closely allied to *Æolothynnus*, Ashmead. It may be distinguished from *Aspidothynnus* to which some of the species approach rather nearly by the very different clypeus.

Type of the genus : *T. zelebori*, Saussure.

Geographical distribution of species. — South Eastern Australia.

1. *T. collaris*, Guérin, Mag. Zool. Vol. 12, p. 13 (1842), ♂. Victoria.
2. *T. dispersus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 133 (1908), ♂. Victoria.
3. *T. iridipennis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 38 (1851), ♂ ♀. South Australia, Victoria.
4. *T. truncatus*, Smith, ibidem, p. 38 (1859), ♂. Victoria.
5. *T. zelebori*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 117 (1867), ♂. New South Wales.
   T. zelebori, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 130 (1908), ♀.
6. *T. ? strangulatus*, Smith, Descr. New Spec. Hym. p. 166 (1879). ♂ ♀. South Australia.

30. Genus ÆOLOTHYNNUS, Ashmead

Æolothynnus. Ashmead, The Canad. Entom. Vol. 35, p. 101 (1903).

Ashmead's description is insufficient, and I am not certain that my determination is correct. He has taken an undescribed species for the type.

Characters. — *Female.* — Mandibles falcate; the clypeus convex in the middle or subcarinate. Head very variable in shape, sometimes strongly compressed laterally. Pronotum never carinated or tuberculate. First abdominal segment broadly depressed at the apex, the raised portion before the depression usually strongly emarginate posteriorly; the second segment with three or four transverse carinæ, the fifth ventral segment punctured. Pygidium very narrow, strongly arched at the base, deflexed posteriorly and very slightly widened at the apex; with a tuft of long hairs on each side near the base. Tarsal ungues bidentate, the posterior pair very feebly so.

Male. — Clypeus variable, always truncate at the apex; the mandibles bidentate, the inner tooth short. Labium very feebly emarginate at the apex, rounded at the sides and strongly narrowed posteriorly. Maxillæ usually with a fringe of long hairs on the outer margin near the base; the maxillary palpi six-jointed, the basal joint very short; the labium broadened from the base to the apex, not very short; the labial palpi four-jointed. Antennæ scarcely longer than, or not as long as the thorax and median segment combined, of about even thickness throughout. Abdomen elongate or fusiform, the segments strongly constricted at the base; the sixth ventral segment with a spine on each side at the apical angles; the hypopygium with parallel sides, with a spine on each side at the apical angles and a longer one on the middle of the apical margin. Anterior coxæ slightly concave. The second recurrent nervure received close to the base of the third cubital cell, sometimes interstitial with the second transverse cubital nervure.

Type of the genus : *Æ. cerceroides*, Smith.

Geographical distribution of species. — Australia and Tasmania.

1. *Æ. ablatus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 148 (1908), ♂ ♀. South Australia.
2. *Æ. armiger*, Turner, ibidem, p. 152 (1908), ♂ ♀. New South Wales.
3. *Æ. aterrimus*, Smith, Descr. New Spec. Hym. p. 164 (1879), ♂. Western Australia.
4. *Æ. baccatus*, Smith, Trans. Ent. Soc. Lond. p. 236 (1868), ♂. Western Australia.
5. *Æ. cerceroides*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 34 (1859), ♂. Eastern Australia.
6. *Æ. decipiens*, Westwood, Arcan. Ent. Vol. 2, p. 105, 124 (1844), ♂. Tasmania.

7. *Æ. dimidiatus*, Westwood, Arcan. Ent. Vol. 2, p. 121 (1844), ♂. Western Australia.
8. *Æ. halophilus*, Turner, Ann. Mag. Nat. Hist (8), Vol. 3, p. 139 (1909), ♂. North Queensland,
9. *Æ. illustris*, Kirby, Horn Exped. Pt. 1 (1898), ♂. — **Pl. 4, Fig. 81.** Central Australia.
10. *Æ. sanguinolentus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 151 (1908), ♂ ♀. New South Wales.
11. *Æ. saundersi*, Turner, ibidem, p. 155 (1908), ♂. South Australia (?).
12. *Æ. umbripennis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 31 (1859), ♂. Victoria.
13. *Æ. ?eyrensis*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 146 (1908), ♂. Central Australia.

31. Genus ACANTHOTHYNNUS, nov. gen.

Thynnus (Æolothynnus) pars. Turner.

Characters. — *Female.* — Mandibles rather long, falcate; the clypeus carinated at the base. Mouth parts very small, the labium broad at the apex, the labial palpi four-jointed; maxillæ minute, the galea rounded at the apex, the maxillary palpi rudimentary, two-jointed. Eyes subrotund, separated by a distance equal to at least twice their diameter from the base of the mandibles; the ocelli absent. Head strongly convex, narrowed anteriorly, strongly depressed laterally above the base of the antennæ. Pronotum as broad as the head, slightly narrowed posteriorly, the surface nearly flat with a raised median carina; the median segment shorter than the pronotum. Basal abdominal segment broadly depressed on the apical margin, second segment with three strong transverse carinæ at the base, transversely striated between the carinæ and the raised apical margin. Pygidium more than half as broad as long on the vertical posterior surface, narrowly emarginate at the apex; the sixth dorsal segment short and narrow, trilobed and longitudinally carinated, the median lobe much the longest and almost pointed. Fifth ventral segment punctured. The basal joint of the anterior tarsus broad, spinose and strongly produced at the apex, the apical spines of the intermediate tibiæ absent. Tarsal ungues bidentate, the posterior ungues simple.

Male. — Clypeus convex, broader than long and broadly truncate at the apex; the labrum as long as broad, bilobed. Labium narrow, almost smooth; the labial palpi four-jointed, the basal joint the longest; maxillary palpi six-jointed, the basal joint very short, the galea rounded at the apex, the apical lobe beyond the dividing line short; the outer margin of the maxillæ with a fringe of long hairs. Pronotum narrowed anteriorly; the median segment rather short and subtruncate posteriorly. Antennæ rather shorter than the thorax and median segment combined, almost straight, the apical joint rather slender. Abdomen elongate, slightly narrowed at the extremities, the segments constricted at the base; seventh dorsal segment broad at the apex; the hypopygium truncate at the apex, with a short apical spine, the sides straight, the apical angles very feebly produced. Fifth ventral segment with a long stout spine at the apical angles. A deep transverse depression between the two basal ventral segments. The second recurrent nervure is received very near the base of the third cubital cell. The apical spines of the intermediate tibiæ very short.

Type of the genus : *A. sannae*, Turner.

Geographical distribution of species. — Australia (northern half).

1. *A. clementi*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 145 (1908), ♂. North Western Australia.
2. *A. sannae*, Turner, ibidem, p. 142 (1908), ♂ ♀. — **Pl. 1, Fig. 25, 26; Pl. 2, Fig. 44.** North Queensland.

32. Genus DORATITHYNNUS, nov. gen.

Thynnus (Agriomyia) pars. Smith, Cat. Hym. Brit. Mus. Vol. 7 (1859).
Thynnus (Æolothynnus) pars. Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33 (1908).

Characters. — *Female.* — Mandibles falcate; the clypeus with a short carina at the base. Eyes round, situated close to the base of the mandibles. Head convex, strongly narrowed posteriorly, twice as broad anteriorly as the pronotum. Pronotum longer than broad, with a broad longitudinal carina, sloped upwards to the scutellum, the median segment obliquely depressed from just behind the scutellum. Abdominal segments with a rounded raised space on each side, apical margin broadly depressed; the second segment finely transversely striated, with a carina near the base and the apical margin raised. Pygidium elongate, narrow, sharply depressed posteriorly and narrowly elongate oval to the apex. Fifth ventral segment punctured. The basal joint of the anterior tarsus not broadened or produced at the apex, rather feebly spinose. Tarsal ungues simple, not bidentate.

Male. — Clypeus broadly truncate at the apex, very feebly convex; the labrum broader than long, subtruncate anteriorly and narrowed posteriorly. Labium broadened to the apex, the labial palpi four-jointed, the basal joint the longest. Maxillary palpi six-jointed, the basal joint very short; the galea rounded at the apex, the apical lobe larger than in *Acanthothynnus*, the maxillæ with a fringe of long hairs on the outer margin. Antennæ about as long as the thorax and median segment combined, not narrowed at the apex. Median segment rounded; the abdomen elongate, narrowed at the base, the segments moderately constricted at the base, the plates of the ventral segments emarginate posteriorly and strongly produced at the angles, the fifth ventral segment with a long stout spine on each side at the apical angles. Hypopygium lanceolate, blunt at the apex, without spines or with a very short apical spine. The apical spines of the intermediate tibiæ are short and slender.

Type of the genus : *D. doddii*, Turner.

Geographical distribution of species. — Australia.

1. *D. bidentatus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 32 (1859), ♂. Western Australia.
2. *D. doddii*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 144 (1908), ♂ ♀. — **Pl. 4, Fig. 82, 83.** North Queensland.
3. *D. orientalis*, Turner, ibidem, p. 144 (1908), ♂. Victoria.

33. Genus CATOCHEILUS, Guérin

Catocheilus. Guérin, Mag. Zool. p. 8 (1842).

Characters. — *Female.* — Head subrectangular, broader than long, the clypeus convex. Pronotum narrower than the head, twice as broad as long, with a row of setigerous punctures on the anterior margin behind which the segment is more or less depressed. Scutellum short and transverse; the median segment very short and obliquely truncate. First abdominal segment vertically truncate anteriorly, with two low transverse carinæ at the apex; the second segment with about eight transverse carinæ; the fifth ventral segment coarsely longitudinally striated. Pygidium truncate posteriorly, at least twice as long as broad, longitudinally striated and without lateral spines, the hypopygium reaching a little beyond the dorsal segment. Tarsal ungues bidentate; the basal joint of the intermediate tarsi slender.

Male. — Clypeus moderately convex, produced and somewhat narrowed towards the apex, where it is truncate; the labrum concealed and very small. Maxillæ with a fringe of hairs on the outer margin, the galea rounded at the apex; maxillary palpi six-jointed, the apical joint rudimentary. Labial palpi four-jointed, the labium clothed with long recurved hairs. Head small, no broader than the pronotum; the antennæ longer than the head and thorax combined, the apical joints rather slenderer than the others. Median segment rounded. Abdomen slightly flattened, elongate, the sides nearly parallel, the segments not appreciably constricted at the base. Seventh dorsal segment deflexed; hypopygium rounded or triangular, with an apical spine, the basal angles more or less prominent. Anterior coxæ strongly concave beneath. The second recurrent nervure is received at about one-sixth from the base of the third cubital cell.

I have been unable to examine the mouth parts closely and thus have to rely on Guérin's figures.

Type of the genus : *C. klugii*, Guérin.

Geographical distribution of species. — South Western Australia.

1. *C. immodestus,* Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 187 (1908), ♂♀. Western Australia.
2. *C. klugii*, Guérin, Mag. Zool. p. 8 (1842), ♂♀. Western Australia.
3. *C. perplexus,* Smith, Descr. New Spec. Hym. p. 164 (1879), ♂ ♀. — Western Australia.

Pl. 2, Fig. 45.

34. Genus HEMITHYNNUS, Ashmead

Hemithynnus. Ashmead, The Canad. Entom. Vol. 35, p. 101 (1903).
Myrmecodes. Ashmead, ibidem, p. 100 (1903) (nec Latreille).
Thynnus. Auctorum (pars).

Characters. — *Female.* — Clypeus with a carina, usually produced into a point on the middle of the anterior margin; the mandibles stout and rather blunt at the apex; the anterior margin of the labrum straight and strongly ciliate; the maxillary palpi three-jointed, very short; the labial palpi four-jointed. Pronotum subrectangular, nearly as broad as the head and much broader than long; the scutellum rather broad. Head much broader than long, with a longitudinal frontal sulcus. First abdominal segment with a transverse groove before the apical margin, the second segment transversely multistriate. Pygidium vertically truncate posteriorly, not narrowed at the base, the sides nearly parallel, with a tooth on each side near the apex and longitudinally striated; the fifth ventral segment longitudinally striated or rugose. Tarsal ungues bidentate.

Male. — Clypeus produced and broadly truncate anteriorly, or more rarely bell-shaped and rounded at the apex; the labrum slightly projecting, broadly rounded anteriorly and ciliate, narrowed posteriorly and longer than broad. Maxillæ with a few long hairs on the outer margin near the base, the galea rounded at the apex, the maxillary palpi six-jointed, the proportionate length of the joints rather variable; the labium variable in shape, usually long, narrow and smooth, but sometimes shorter, with a few long recurved hairs at the apex. Antennæ longer than the thorax and median segment combined, the apical joints slender. Pronotum as broad as the head, the median segment oblique or rounded. Sixth ventral segment without spines; the seventh dorsal segment deflexed, not produced or flattened. Hypopygium triangular with an apical spine, the basal angles with or without a blunt lobe. The second recurrent nervure is received by the third cubital cell at from one-quarter to one-third from the base. The claspers are long and rather narrow.

The mouth parts are rather variable in structure in both sexes and the genus may have to be further divided when more material is available.

Type of the genus : *H. hyalinatus,* Westwood.

Geographical distribution of species. — Australia (the southern half) and Tasmania.

1. *H. affinis,* Guérin, Voy. Coquille, Zool. Vol. 2, p. 226 (1839). ♂. Western Australia.
2. *H. annulatus,* Kirby. Trans. Linn. Soc. Lond. Vol. 12, p. 476 (1818), ♂. Western Australia.
   Myrmecodes australis, Gray, Griffith's Anim. Kingd. Vol. 15, p. 516 (1832), ♀.
5. *H. apterus,* Olivier, Encycl. Méth. Ins. Vol. 8, p. 137 (1811), ♀. — **Pl. 2, Fig. 47.** South Eastern Australia, Tasmania.
   Thynnus variabilis, Kirby, Trans. Linn. Soc. Lond. Vol. 12, p. 476 (1818), ♂.
   var. audax. Smith, Trans. Ent. Soc. Lond. p. 234 (1868), ♂. Western Australia.
4. *H. australis,* Boisduval, Voy. Astrolabe, Zool. Vol. 2(6), p. 655 (1833), ♂. Victoria.
5. *H. caelebs,* Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 125 (1867), ♂, Australia.
6. *H. connectens,* Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 45 (1859), ♀. Western Australia.
7. *H. crinitus,* Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 184 (1908), ♂♀. — **Pl. 2, Fig. 29; Pl. 4, Fig. 86, 87.** Victoria.
8. *H. excoriatus,* Turner, ibidem, p. 177 (1908), ♂♀. South Eastern Australia.
9. *H. flavifrons,* Smith, Trans. Ent. Soc. Lond. (3), Vol. 2 (5), p. 390 (1865), ♀. Western Australia.
10. *H. flavipennis,* Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 21 (1859), ♂. New South Wales.
    H. flavipennis, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 190 (1908), ♀.
11. *H. hyalinatus,* Westwood, Arcan. Ent. Vol. 2, p. 106 (1844), ♂♀. Tasmania, New S. Wales.
12. *H. inconstans,* Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 26 (1859), ♂. South Eastern Australia.
    Thynnus signatus, Smith, ibidem, p. 44 (1859), ♀.
13. *H. kirbyi,* Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 183 (1908), ♂♀. New South Wales.
14. *H. maculosus,* Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 16 (1859), ♂. Western Australia.
15. *H. oppositus,* Smith, Descr. New Spec. Hym. p. 162 (1879), ♂. Western Australia.
16. *H. petulans,* Smith, ibidem, p. 165 (1879), ♂. Western Australia.
17. *H. protervus,* Smith, ibidem, p. 159 (1879), ♂. South Australia.
    H. protervus, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 179 (1908), ♀.
18. *H. rufiventris,* Guérin, Voy. Coquille, Zool. Vol. 2, p. 227 (1839), ♂. New South Wales.
    H. rufiventris, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 13 (1859), ♀.
19. *H. senex,* Smith, ibidem, p. 19 (1859), ♂. Western Australia.
20. *H. tuberculiventris,* Westwood, Arcan. Ent. Vol. 2, p. 118 (1844), ♂. Western Australia.
21. *H. wallisii,* Smith, Cath. Hym. Brit. Mus. Vol. 7, p. 14 (1859), ♂♀. Victoria, New South Wales.

35. Genus LOPHOCHEILUS, Guérin

Lophocheilus. Guérin, Mag. Zool. Vol. 12 (1842).
Thynnus. Auctorum.

Characters. — *Female.* — Clypeus without a carina, or with a very short carina at the base, the anterior margin transverse and straight. Head much broader than long, strongly rounded posteriorly, the front with a short longitudinal sulcus; the eyes ovate, not touching the base of the mandibles; the position of the ocelli faintly indicated by shallow punctures. Pronotum much broader than long, narrower than the head, the scutellum usually short and broad, the median segment oblique from just behind the scutellum. Abdomen broad; the first segment with a transverse groove before the apex and sometimes with one or two low transverse carinæ before the groove. Second segment with seven or more transverse carinæ, the carinæ sometimes broken and irregular. Pygidium not contracted at the

base, much longer than broad, the sides nearly parallel, often very narrow, longitudinally striated and not notched at the sides. Fifth ventral segment coarsely rugose or longitudinally striated. The two spines at the apex of the intermediate tibiæ are of almost equal length; the basal joint of the intermediate tarsi is not broadened.

Male. — Clypeus produced over the mandibles and rather narrowly truncate at the apex. Labrum concealed, short, strongly narrowed posteriorly, truncate or very broadly and shallowly emarginate on the anterior margin. Labium with two recurved tufts of long hairs at the apex, the labial palpi four-jointed, rather stout, the joints of about equal length. Maxillæ with a very sparse fringe of hairs on the outer margin, the apical lobe of the galea beyond the dividing line very short and broadly rounded at the apex; the maxillary palpi six-jointed, the basal joint very short. Antennæ longer than the thorax and median segment combined, the apical joints rather slender and very slightly arcuate. Pronotum narrower than the head; the median segment rounded. Abdomen fusiform, the segments strongly constricted at the base; the groove between the two basal ventral segments rather deep. Seventh dorsal segment depressed, not produced into a flattened plate; hypopygium tridentate, the basal teeth often blunt, the breadth of the apical portion variable. Claspers short and broad.

Type of the genus : *L. villosus*, Guérin.

Geographical distribution of species. — The southern half of Australia and Tasmania.

1. *L. anilitatis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 37 (1859), ♂ ♀. Victoria.
2. *L. fervens*, Smith, ibidem, p. 31 (1859), ♂. Australia.
3. *L froggatti*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 181 (1908), ♂ ♀. — **Pl. 2, Fig. 30.** New South Wales.
4. *L. laeviceps*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 44 (1859), ♀. Western Australia.
5. *L. mamillatus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 171 (1908), ♂. Western Australia.
6. *L. obscurus*. Klug. Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 22 (1842), ♂. — **Pl. 2, Fig. 48.** S. E. Australia.
   L. obscurus, Westwood, Arcan. Ent. Vol. 11, p. 138 (1844), ♀.
7. *L. villosus*, Guérin, Mag. Zool. Vol. 7 (1842), ♂. Tasmania, Victoria.
8. *L.* ? *ambiguus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 172 (1908), ♂ ♀. Australia.
9. *L.* ? *sanguineiventris*, Schulz, Fauna Südwest Austral. Vol. 1 (13), p. 455 (1908), ♂ ♀. Western Australia.

36. Genus MACROTHYNNUS, Turner

Thynnus, subgenus **Macrothynnus.** Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 194 (1900).
Thynnus. Smith, partim.

Characters. — *Female.* — Clypeus with a carina at the base not reaching the apex, the apical margin truncate. Head much broader than long, slightly convex; the eyes elongate ovate and oblique, ocelli absent. Pronotum as broad as the head, much broader than long and slightly narrowed posteriorly, scutellum narrow, the median segment short. Abdomen large, the second segment finely transversely carinated, the carinæ numerous and strongest on the middle of the segment. Pygidium large, truncate posteriorly, not contracted at the base, the surface of the truncation rather broadly ovate and longitudinally striated. Fifth ventral segment longitudinally striated. Intermediate tibiæ with two apical spurs. The first dorsal segment with a transverse groove near the apex.

Male. — Clypeus broadly truncate at the apex, the labrum concealed; the labrum broad, very broadly rounded anteriorly and ciliated, slightly narrowed near the base. Labium narrow and rather long, almost smooth, the labial palpi four-jointed. Maxillæ with a rather thin fringe of long hairs on the outer margin, the galea rounded at the apex; maxillary palpi six-jointed, the apical joint the shortest. Antennæ as long as the thorax and median segment combined, the three apical joints slender. Thorax broad; the median segment short and almost vertically truncate posteriorly. Abdomen elongate conical, the division between the first and second ventral segments rather shallowly grooved; the dorsal plate of the seventh segment slightly produced, rounded at the apex and longitudinally striated. Hypopygium broadly triangular, rounded at the apex, with a minute apical spine. The claspers are long and narrow, strongly pubescent at the apex.

Type of the genus : *M. simillimus*, Smith.

Geographical distribution of species. — Southern Australia.

1. *M. insignis,* Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 15 (1859), ♂. Western Australia.
   M. insignis, Turner, Proc. Linn. Soc. N. S Wales, Vol. 33, p. 195 (1908), ♀
2. *M. simillimus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 15 (1859), ♂. New South Wales.
   Thynnus molitor, Smith, ibidem, p. 43 (1859), ♀.

37. Genus THYNNOIDES, Guérin

Thynnoides. Guérin, in Duperrey, Voy. Coquille, Zool Vol. 2, p. 214 (1830).

Characters. — *Female.* — Clypeus truncate at the apex, without a carina; the mandibles rather broad. Labrum transverse margined with long setæ. Maxillæ small, the galea rounded and not divided; maxillary palpi three-jointed, the third joint very minute; labial palpi three-jointed. Head variable in shape, convex and not excavated Pronotum narrower than the head, much broader than long and nearly rectangular, with a row of deep setigerous punctures on the anterior margin. Median segment short, much shorter than the pronotum, and obliquely truncate posteriorly. Abdomen much broader than the thorax; the first segment with a very broad transverse depression before the apex, the second segment with five or six strongly raised transverse carinæ; the fifth ventral segment rugose. Pygidium very narrow, lanceolate, oblique and longitudinally carinated from the base, contracted near the middle and more sharply truncate posteriorly; the hypopygium slightly widened and rounded at the apex, the sixth dorsal segment with lateral carinæ. The basal joint of the intermediate tarsi is slender, never broadened or flattened; the tarsal ungues bidentate.

Male. – Clypeus produced, subtruncate or shallowly emarginate at the apex. Mandibles bidentate; the labrum broad and full, rounded at the sides and subtruncate at the apex, projecting beyond the clypeus. Maxillary palpi six-jointed, the basal joint rather short, the three apical joints rather slender; the galea rounded at the apex, the maxillæ with a thick fringe of very long hairs on the outer margin. Labial palpi four-jointed, the joints nearly equal in length; the labium long and narrow. Antennæ longer than the thorax and median segment combined, the apical joints very feebly arcuate. Pronotum slightly narrower than the head; the median segment rounded and depressed to the apex. Abdomen fusiform or elongate fusiform; the segments strongly constricted at the base, the first ventral segment deeply divided from the second. No spines at the apical angles of the sixth segment. The seventh segment without a flattened dorsal plate; the hypopygium tridentate, very much narrowed beyond the basal spines and produced with nearly parallel sides to the base of the apical spine; more rarely the basal spines are scarcely developed and the sides strongly curved upwards. Anterior coxæ very strongly concave.

Type of the genus : *T. fulvipes,* Guérin.

Geographical distribution of species. — Australia (the southern half) and Tasmania.

1. *T. bidens*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 118 (1867), ♂. South Eastern Australia.
   T. viduus, Saussure, ibidem, p. 123 (1867), ♀.
2. *T. fulvipes*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 233 (1839), ♂. New South Wales.
   T. fulvipes, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 247 (1908), ♀.
3. *T. fumipennis*, Westwood, Arcan. Ent. Vol. 2, p. 108 (1844), ♂ ♀. Victoria.
4. *T. gracilis*, Westwood, ibidem, p. 139 (1844), ♂ ♀. — **Pl. 2, Fig. 52.** South Australia.
5. *T. pugionatus*, Guérin, Voy. Coquille, Zool. Vol. 2, p. 234 (1839), ♂. New South Wales.
6. *T. senilis*, Erichson, Arch. f. Naturg. Vol. 8 (1), p. 263 (1843), ♂. Tasmania.
7. *T. waterhousei*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 244 (1908), ♂ ♀. New South Wales.

38. Genus ELIDOTHYNNUS, nov. gen.

Characters. — *Female.* — Clypeus without a carina; the head rather flat and not thick, subrectangular or slightly narrowed posteriorly, a little broader than long. Eyes rather large, broadly oval, situated on the sides of the head near the base of the mandibles. Front without a sulcus, the sides rarely concavely depressed. Pronotum broader than long, narrower than the head; the scutellum rather broad; the median segment about half as long as the pronotum, obliquely truncated posteriorly. Abdomen broader than the thorax, the first segment with the apical margin depressed, broadly in the middle, more narrowly at the sides; the second segment transversely carinated, with three strongly raised carinæ near the base, the space between them and the strongly raised apical margin usually transversely striated. Fifth ventral segment coarsely longitudinally striated. Pygidium very narrow and long, obliquely deflexed and strongly contracted from close to the base, obliquely truncated posteriorly, the face of the truncation narrowly elongate ovate, the hypopygium projecting beyond the dorsal segment and rounded at the apex. Intermediate tibiæ with two apical spines of unequal length, the basal joint of the intermediate tarsi slender. Tarsal ungues bidentate.

Male. — Clypeus large, produced and broadly truncated at the apex; the labrum broad and full, projecting slightly beyond the clypeus. Labium long and narrow, the labial palpi four-jointed, the joints nearly equal in length. Maxillæ broad, with a fringe of fine but long hairs on the outer margin, the galea rounded at the apex, the dividing line far from the apex; maxillary palpi six-jointed, the basal joint a little the shortest. Pronotum nearly as broad as the head; the median segment rounded at the sides. Antennæ not longer if as long as the thorax and median segment combined and of about equal thickness throughout, rather stout. Abdomen elongate, the sides nearly parallel, the transverse groove between the two basal ventral segments shallow, the fifth ventral segment without a spine at the apical angles. The seventh dorsal segment not produced into a flattened plate, hypopygium short, usually triangular, with an apical spine, the basal angles more or less prominent. Claspers broad and long, the uncus long. Anterior coxæ very slightly concave beneath.

The genus is allied to *Thynnoides,* Guérin.

Type of the genus : *E. melleus*, Westwood.

Geographical distribution of species. — The southern half of Australia.

1. *E. agilis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 20 (1859), ♂. Western Australia.
2. *E. basalis*, Smith, ibidem, p. 23 (1859), ♂. — **Pl. 4, Fig. 88, 89.** Southern Australia.
   T. vastator, Smith, Descr. New Spec. Hym. p. 158 (1879), ♀.

3. *E. frenchi*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 226 (1908), ♂. — Victoria.
4. *E. insidiator*, Smith, Descr. New Spec. Hym. p. 163 (1879), ♂ ♀. — Western Australia.
5. *E. irritans*, Smith, Trans. Ent. Soc. Lond. p. 235 (1868), ♂. — Western Australia.
   E. irritans, Turner, Proc. Linn. Soc. N. S Wales, p. 228 (1908), ♀.
6. *E. melleus*, Westwood, Arcan Ent. Vol. 2, p. 118 (1844), ♂. — **Pl. 2, Fig. 42.** — Southern Australia.
   E. melleus, Smith, Cat. Hym. Brit Mus. Vol. 7, p. 67 (1859), ♀.
7. *E. pseudomelleus*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 140 (1909). — New South Wales.
8. *E. subinterruptus*, Smith, Trans. Ent. Soc. Lond. p. 235 (1868). ♂. — Western Australia.
9. *E. tuberculifrons*, Smith, Descr. New Spec. Hym. p. 161 (1879), ♂. — Western Australia.
   E. tuberculifrons, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 231 (1908), ♀.
10. *E.* ? *ultimus*, Turner, ibidem, p. 246 (1908), ♂ ♀. — Queensland.

39. Genus CAMPYLOTHYNNUS, nov. gen.

Thynnus (pars). Smith, Cat. Hym. Brit. Mus. Vol. 7 (1859).

Characters. — *Female.* — Clypeus short, broadly truncate at the apex, without a carina. Head much broader than long, rounded at the posterior angles; with a shallow, longitudinal, frontal sulcus; the position of the ocelli obscurely indicated. Pronotum subrectangular, much broader than long. First abdominal segment with a shallow transverse groove before the apex; the second segment with a transverse carina near the base, followed by three strongly raised transverse carinæ, the space between the carinæ and the apex finely transversely striated. Fifth ventral segment rugose. Pygidium arched at the base, truncate posteriorly, constricted before the base of the truncation by a concave depression on each side; the surface of the truncation elongate ovate, the sixth dorsal segment much shorter than the hypopygium and furnished with a spine on each side close to the base.

Male. — Clypeus large, broadly truncate at the apex, the labrum projecting. Antennæ stout, of even thickness throughout, rather shorter than the thorax and median segment combined. Median segment broad, obliquely truncate from the postscutellum. Abdomen elongate, the sides nearly parallel; the groove between the first and second ventral segments narrow and shallow, the sixth ventral segment without spines. The dorsal plate of the seventh segment not produced. Hypopygium with acute basal spines, thence elongate triangular to the base of the apical spine.

The genus is closely allied to *Elidothynnus*, but may be distinguished by the much broader pygidium and the difference in the sculpture of the second dorsal and fifth ventral segments in the female and by the differences in the median segment and hypopygium of the male.

Type of the genus : *C. flavopictus*, Smith.

Geographical distribution of species. — Western Australia.

1. *C. assimilis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 20 (1859), ♂. — Western Australia.
   C. flavofasciatus, Smith, ibidem, p. 45 (1859), ♀.
2. *C. flavopictus*, Smith, ibidem, p. 21 (1859), ♂. — **Pl. 2, Fig. 51.** — Western Australia.
   C. flavopictus, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 224 (1908), ♀.

40. Genus LESTRICOTHYNNUS, nov. gen.

Characters. — *Female.* — Clypeus very short, without a carina; the mandibles falcate. Labium and maxillæ small, the labial palpi three-jointed; maxillary palpi rudimentary, two-jointed. Head rather broader than long, scarcely broader than the pronotum and moderately convex. Eyes ovate, not touching the base of the mandibles. Pronotum subrectangular, much broader than long; scutellum short; median segment about half as long as the pronotum, obliquely truncate posteriorly. First abdominal segment with a broad transverse groove before the apex; the second segment with five or more transverse carinæ; the fifth ventral segment rugose. Pygidium arched from the base and truncate posteriorly, not very strongly contracted at the base; without concave depressions before the truncation; the surface of the truncation broadened to the apex from the base, usually smooth. Tarsal ungues bidentate; intermediate tibiæ with two spines of about equal length, the basal joint of the intermediate tarsi not dilated.

Male. — Clypeus produced and rather broadly truncate on the apical margin. Labrum broader than long, broadly rounded at the apex, projecting a little beyond the clypeus; labium long and narrow, almost smooth, the labial palpi four-jointed, the joints of about equal length; maxillary palpi six-jointed, the basal joint rather the shortest, the galea rounded at the apex, the maxillæ with a rather poorly developed fringe of hairs on the outer margin. Antennæ a little longer than the thorax and median segment combined, the apical joints a little slenderer than the basal; the interantennal prominence well developed. Head very little broader than the pronotum; the median segment rounded. Abdomen elongate, narrowed at the extremities, sometimes fusiform, the transverse groove between the two basal ventral segments broad and deep, the segments in some of the species smooth, in others moderately constricted at the base. Sixth ventral segment without a spine at the apical angles. Hypopygium tridentate, the basal spines either acute or forming a rounded lateral projection, triangular from the basal spines to the base of the acute apical spine. The dorsal plate of the seventh segment is not produced or flattened. Claspers rather narrow.

Some of the species included doubtfully in this genus may have to be separated when more material is available.

Type of the genus : *L. nubilipennis,* Smith.

Geographical distribution of species. — Australia.

1. *L. frauenfeldianus,* Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 120 (1867), ♂. — New South Wales.
   L. frauenfeldianus, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 240 (1908), ♀.
2. *L. nubilipennis,* Smith, Descr. New Spec. Hym. p. 167 (1879), ♂ ♀. — North Queensland.
   Pl. 2, Fig. 50.
3. *L. optimus,* Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 29 (1859), ♂. — Western Australia.
4. *L. sulcatus,* Smith, ibidem, p. 42 (1859), ♀. — Western Australia.
5. *L.* ? *cognatus,* Smith, ibidem, p. 28 (1859), ♂. — South Eastern Australia.
6. *L.* ? *constrictus,* Smith, ibidem, p. 19 (1859), ♂. — Western Australia.
7. *L.* ? *lubricus,* Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 175 (1908), ♂ ♀. — North Queensland.
8. *L.* ? *modestus,* Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 19 (1859), ♂. — Western Australia.
   L. modestus, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 241 (1908), ♀.
9. *L.* ? *moechus,* Turner, ibidem, p. 234 (1908), ♂ ♀. — New South Wales.
10. *L.* ? *vigilans,* Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 41 (1859), ♂. — South Eastern Australia.
    L. vigilans, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 173 (1908), ♀.

41. Genus BELOTHYNNUS, nov. gen.

Characters. — *Male.* — Clypeus produced and truncate at the apex; the labrum slightly exposed, subtruncate at the apex. Maxillary palpi six-jointed, the joints nearly equal in length, the basal joint not shortened; maxillæ with a very thin fringe of hairs on the outer margin, the galea rounded at the apex. Labial palpi four-jointed, the joints of equal length; the labium smooth. Antenæ stout as long as the head and thorax combined. Median segment obliquely truncate from the postscutellum, pubescent. Abdomen fusiform, the segments not constricted at the base, the first ventral segment tuberculate or subtuberculate at the apex, separated from the second segment by a very deep groove. Hypopygium tridentate, elongate and narrow beyond the basal teeth to the base of the acute apical spine. Dorsal plate of the seventh segment not produced or flattened. Anterior coxæ very feebly concave or nearly flat.

Female unknown.

Allied to *Thynnoides*, Guérin, from which it may be distinguished by the smoother maxillæ, the almost flat anterior coxæ and the absence of the constriction at the base of the abdominal segments.

Type of the genus : *B. unifasciatus*, Smith.

Geographical distribution of species. — Australia.

1. *B. binghami*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 244 (1908), ♂. Australia.
2. *B. impetuosus*, Smith, Trans. Ent. Soc. Lond. p 233 (1868), ♂. South Australia.
3. *B. melanotus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 243 (1908), ♂. Western Australia.
4. *B. unifasciatus*, Smith, in Brenchley, Cruise of the Curaçao, p. 458 (1873), ♂. North Queensland.

42. Genus LEPTOTHYNNUS, nov. gen.

Thynnus (pars), Westwood, Arcan. Ent. Vol. p. 143 (1844).
Thynnus, Subgenus **Lophocheilus** (pars). Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 176 (1908).

Characters. — *Female.* — Clypeus not produced in the middle, with a carina from the base not reaching the apex. Mandibles rather blunt at the apex, broad and grooved on the outer side near the base. Eyes oblique, oval, not touching the base of the mandibles. Head broader than long, very slightly convex. Pronotum narrower than the head, much broader than long and slightly narrowed posteriorly, as long as the scutellum and median segment combined. First abdominal segment rugose, with a deep transverse groove before the apical margin; second segment with five strongly raised transverse carinæ including the recurved apical margin, the carinæ irregular at the sides. Fifth ventral segment rugose. Pygidium oblique, not contracted at the base, less than twice as long as broad, longitudinally striated, the sides parallel, the hypopygium not projecting beyond the dorsal segment, the latter truncate at the apex with a membranous lobe on each side. Tarsal ungues bidentate. First joint of the intermediate tarsin not broad or flattened.

Male. — Clypeus convex, produced in the middle and rather broadly truncate at the apex. Labrum much broader than long, the anterior margin almost straight, the sides moderately convergent posteriorly. Maxillary palpi six-jointed, the basal joint a little shorter than the others, the maxillæ broad and almost smooth, the apical lobe of the galea large and broadly rounded. Labium long and narrow,

smooth. Antennæ rather longer than the thorax and median segment combined, the apical joints slender and very feebly arcuate. Median segment rounded. Abdomen elongate, the segments scarcely constricted at the base; the sixth ventral segment with a spine on each side at the apical angles; the dorsal plate of the seventh segment flatly produced and rounded at the apex. Hypopygium subtriangular, with a prominent rounded lobe at the basal angles, the apical spine acute. The first ventral segment is longitudinally carinate in the middle, but is not deeply separated from the second. The claspers are rather broad and very little longer than the uncus.

Type of the genus : *L. purpureipennis*, Westwood.

Geographical distribution of species. — New South Wales.

1. *L. purpureipennis*, Westwood, Arcan. Ent. Vol. 2, p. 143 (1844), ♂. — New South Wales.
Pl. 2, Fig. 49.
L. purpureipennis, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 176 (1908), ♀.

43. Genus TACHYNOTHYNNUS, nov. gen.

Thynnus. Auctorum (pars).
? **Tachynomyia.** Ashmead, The Canad. Entom. Vol. 36, p. 99 (1903) (nec Guérin).

Characters. — *Female.* — Clypeus without a carina, the mandibles broad and strong, blunt at the apex, with a fringe of long hairs on the outer margin. Head no broader than the thorax, moderately convex, rarely with a concave depression on each side; the eyes ovate, slightly oblique, the ocelli absent. Pronotum much broader than long; the median segment not very short, the dorsal surface half as long as the pronotum, truncate posteriorly. Abdomen broader than the thorax, the first segment with a transverse groove before the apex, the anterior portion not transversely carinated. Second segment transversely carinated, the carinæ variable in number, but never less than seven. Pygidium strongly constricted at the base of the posterior truncation, the sixth dorsal segment gradually widened to near the apex, where it expands laterally into coriaceous lobes; the hypopygium broadly rounded and shallowly emarginate on the middle of the apical margin. Intermediate tibiæ broad and thickened, with two spines at the apex, the shorter spine more than half as long as the other.

Male. — Clypeus large, broadly truncate at the apex; the labrum projecting, broadly rounded. Labial palpi four-jointed; the labium smooth. Maxillary palpi six-jointed, the third and fourth joints shorter than the others and truncate at the apex; the line dividing the galea is far removed from the apex, which is strongly rounded, the maxillæ almost without hairs. Antennæ stout, of almost even thickness throughout and about as long as the head and thorax combined. Thorax broad and stout, the median segment almost vertically truncate from just behind the postscutellum and densely clothed with long pubescence. Abdomen elongate subconical, the first ventral segment carinate longitudinally and truncate at the apex, the groove between the two basal segments not very deep. The angles of the sixth ventral segment are not spined. The dorsal plate of the seventh segment is very slightly produced, broad and truncate at the apex. Hypopygium tridentate, triangular or lanceolate from the basal spines to the base of the apical spine.

Type of the genus : *T. shuckardii*, Guérin.

Geographical distribution of species. — Australia (the southern half only).

1. *T. confusus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 13 (1859), ♂. Western Australia.
2. *T. flavilabris*, Guérin, Mag. Zool. Vol. 12, p. 8 (1842), ♂ New South Wales.

3. *T. flaviventris*, Guérin, in Duperrey, Voy. Coquille, Zool. Vol. 2, p. 229 (1839), ♂ ♀. Western Australia.
4. *T. guerinii*, Westwood, Arcan. Ent. Vol. 2 (2), p. 137 (1844), ♂ ♀. Victoria.
5. *T. obscuripennis*, Guérin, in Duperrey, Voy. Copuille, Zool. Vol. 2, p. 227 (1839), ♂. Australia.
6. *T. picipes*, Westwood, Arcan. Ent. Vol. 2 (2), p. 114 (1844), ♂. Southern Australia.
7. *T. shuckardii*, Guérin, Mag. Zool. Vol. 12, p. 7 (1842), ♂ ♀. — **Pl. 2, Fig. 53.** New South Wales.
8. *T. sulcifrons*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 43 (1859), ♀. Western Australia.
9. *T. varipes*, Smith, ibidem, p. 67 (1859), ♂. South and Western Australia.
10. *T.* ? *anchorites*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 212 (1908), ♂. Central Australia.

44. Genus POGONOTHYNNUS, nov. gen.

Thynnus. Auctorum.

Characters. — *Female.* — Clypeus without a carina, truncate at the apex; head slightly convex, no broader than the pronotum; the eyes ovate situated near the base of the mandibles; ocelli absent. Mandibles rather long, with a very feeble tooth on the inner margin. Pronotum subrectangular, broader than long; the scutellum not very narrow, as broad at the base as the pronotum; the median segment short, less than half as long as the pronotum, obliquely truncate posteriorly. Abdomen broader than the thorax, the basal segment strongly transversely carinated on the dorsal surface, the second segment strongly transversely carinated, the carinæ about seven in number, the fifth ventral segment tranversely rugose. Pygidium obliquely truncate posteriorly, contracted above the base of the truncation, the surface of the truncation rather narrow, gruadually widened from the base, with arcuate carinæ, the sixth dorsal segment expanding at the apex into membranous lateral lobes, the hypopygium extending very little beyond the dorsal segment, broadly rounded at the apex and feebly emarginate in the middle of the apical margin. Intermediate tibiæ with two spines, the one less than half the length of the other; the tibiæ broad and stout.

Male. — Clypeus large, broadly truncate at the apex; the labrum very slightly prominent. Antennæ as long as the thorax and median segment combined, stout and of almost even thickness throughout. Head concave beneath, the maxillæ with a fringe of very long curved hairs on the outer margin. Median segment obliquely truncate from a little behind the postscutellum, covered with long pubescence. Abdominal segments not, or very slightly, constricted at the base; the basal segment nearly as broad at the apex as the second, with a median carina beneath and rather deeply separated from the second segment. Sixth ventral segment with a spine on each side at the apical angles; the dorsal plate of the seventh segment very slightly produced. Hypopygium tridentate, very narrowly produced from the basal spines, elongate with almost parallel sides to the base of the apical spine.

Type of the genus : *P. fenestratus*. Smith.

Geographical distribution of species. — South Western Australia.

1. *P. fenestratus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 18 (1859), ♂. Western Australia.
   T. crassipes, Smith, ibidem, p. 44 (1859), ♀.
2. *P. morosus*, Smith, Descr. New Spec. Hym. p. 168 (1879), ♂. Western Australia.
3. *P. vestitus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 15 (1859), ♂. Western Australia.
4. *P. walkeri*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 236 (1908), ♂. Western Australia.

45. Genus ZASPILOTHYNNUS, Ashmead

Thynnus. Auctorum.
Zaspilothynnus. Ashmead, The Canad. Entom. Vol. 35, p. 99 (1903).

Characters. — *Female.* — Clypeus without a carina; the labrum transverse; maxillary palpi very minute, two-jointed; labial palpi three-jointed. Head variable, not broader than the pronotum, usually convex, rarely with a deep concave impression on each side. Pronotum much broader than long; the median segment short, obliquely truncate posteriorly. First abdominal segment with a transverse groove before the apex, the dorsal surface usually with several low transverse carinæ before the groove, more rarely obliquely striated; second segment with many transverse carinæ. Fifth ventral segment longitudinally striated or rugose. Pygidium usually broadly ovate, with the dorsal segment rounded at the apex; more rarely elongate-ovate, with the dorsal segment trilobed and the contracted space above the truncation longitudinally striated instead of transversely as in the majority of the species; the concave area on each side of the constricted space at the base of the truncation variable in size, sometimes almost obsolete. Intermediate tibiæ very broad and thickened, the basal joint of the intermediate tarsi more or less dilated and flattened; the intermediate tibiæ with two apical spines, one very short, the other well developed.

Male. — Clypeus large, more or less prominent at the base, broadly truncate at the apex; the labrum broad and rounded, projecting a little beyond the clypeus. Labial palpi four-jointed, the labium long and narrow; maxillæ with a fringe of long hairs, sometimes sparse, on the outer margin, the galea subtruncate or broadly rounded at the apex; maxillary palpi six-jointed, the joints subequal. Antennæ stout and of even thickness throughout, about as long as the thorax and median segment combined. Median segment and abdomen variable, the postscutellum never produced beyond the base of the truncation of the median segment; abdomen usually almost smooth, the segments very rarely constricted at the base. Sixth ventral segment with a spine at the apical angles; the seventh dorsal segment produced from near the base into a flat plate, rounded at the apex. Hypopygium more or less triangular, almost always with a basal spine or lobe on each side, the apical spine usually well developed, very rarely absent. Anterior coxæ rarely concave.

The genus admits of division into several groups and may have to be divided. The males may be distinguished from *Thynnus* by the tridentate or triangular hypopygium; the distinctions between the females are less satisfactory, but in the few species of *Zaspilothynnus* in which the pygidium is elongate-ovate the narrow area before the truncation is longitudinally, not transversely striated.

Type of the genus : *Z. interruptus*, Westwood.

Geographical distribution of species. — Australia.

1. *Z. andreanus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 231 (1908), ♂. — New South Wales.
2. *Z. atrocior*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 142 (1909), ♂. — Victoria.
3. *Z. atrox*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 237 (1908), ♂. — Western Australia.
4. *Z. campanularis*, Smith, Trans. Ent. Soc. Lond. p. 232 (1868), ♂. — New South Wales.
5. *Z. carbonarius*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 23 (1859), ♂. — South Eastern Australia.
   Thynnus caelebs, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 112 (1867), ♀.
6. *Z. crudelis*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 238 (1908), ♂. — Western Australia.
7. *Z. dilatatus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 43 (1859), ♀. — Australia.

8. *Z. excavatus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 216 (1908), ♂ ♀. — **Pl. 4, Fig. 91, 92.** — North Queensland.
9. *Z. interruptus*, Westwood, Arcan. Ent. Vol. 2, p. 115 (1844), ♂. — New South Wales.
   Thynnus leachiellus, Westwood, ibidem, p. 135 (1844), ♀.
10. *Z. multistrigatus*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 143 (1909), ♀. — New South Wales.
11. *Z. nigripes*, Guérin, Mag. Zool. Vol. 12, p. 10 (1842), ♂. — Western Australia.
12. *Z. novarae*, Saussure, Reise Novara, Zool. Vol. 2, Hym. p. 119 (1867), ♂ ♀. — New South Wales.
13. *Z. ochrocephalus*, Smith, Trans. Ent. Soc. Lond. p. 231 (1868), ♂. — Western Australia.
14. *Z. picticollis*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 216 (1908), ♀. — **Pl. 4, Fig. 90.** — Western Australia.
15. *Z. pseustes*, Turner, ibidem, p 235 (1908), ♂ ♀. — New South Wales.
16. *Z. seductor*, Smith, Trans. Ent. Soc. Lond. p. 234 (1868), ♂. — Western Australia.
    Z. seductor, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 215 (1908), ♀.
17. *Z. siccus*, Turner, Trans. Ent. Soc. Lond. p. 66 (1908), ♂. — Central Australia.
18. *Z. simplex*, Smith, Descr. New Spec. Hym. p. 167 (1879), ♂. — Western Australia.
19. *Z. vernalis*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 210 (1908), ♂ ♀. — **Pl. 2, Fig. 31, 32.** — North Queensland.
20. *Z. wagneri*, Schulz, Fauna Südwest Austral. Vol. 1 (13), p. 452 (1908), ♂. — Western Australia.

46. Genus THYNNUS, Fabricius

Thynnus. Fabricius, Syst. Ent. p. 360 (1775).
Myrmecodes. Latreille, Gen. Crust. et Ins. Vol. 4, p. 118 (1809).
Homalothynnus. Enderlein, Zool. Anzeig. (1904).

Characters. — *Female.* — Head rather small; clypeus truncate at the apex, not carinated; the front more or less flattened, with a broad, longitudinal; median carina, and a concave depression, sometimes very shallow, but usually deep and long, on each side. Eyes ovate, situated near the base of the mandibles; ocelli absent. Antennæ short and curved; the scape arched and sometimes with a tubercular prominence on the middle of the inner margin. Mandibles rather long and acute at the apex. Pronotum much broader than long; the median segment short and almost vertically truncate posteriorly. Abdomen broader than the thorax, the first segment with a transverse groove before the apex and usually with a tuft of hair on the middle of the apical margin; the second segment transversely carinated, the carinæ never less than seven in number. Pygidium truncate posteriorly, sharply narrowed and transversely striated above the base of the truncation, the surface of the truncation elongate-ovate, the dorsal segment more or less trilobed at the apex, the hypopygium projecting beyond the dorsal segment and narrowly emarginate at the apex. Fifth ventral segment coarsely longitudinally striated. Intermediate tibiæ with one well developed spine at the apex; the tarsal ungues bidentate.

Male. — Clypeus very large, the apex usually shallowly bisinuate with the angles prominent, but often simply and very broadly truncate. Antennæ shorter than the thorax, the flagellum of almost equal thickness throughout, rather widely separated at the base, the front between them prominent, with a longitudinal sulcus. Pronotum as broad as the head; mesonotum with two longitudinal sulci on each side; scutellum very large; the median segment vertically, or almost vertically, truncate, the dorsal surface nearly always concealed by the scutellum and postscutellum, which are sometimes produced beyond the base of the truncation. Abdomen subconical, the basal segment as broad as the second and

truncate anteriorly. Seventh dorsal segment produced from the base into a flat plate, which is longitudinally striated and nearly always narrowly emarginate at the apex. Hypopygium with five spines. Sixth ventral segment with a spine on each side at the apical angles; the first ventral segment is longitudinally raised in the middle, but there is no perceptible groove between the first and second segments. The abdominal segments are never constricted at the base, and there is no triangular tooth on the middle of the first ventral segment. Wings large. The labrum is broad and full, rounded at the sides and projecting beyond the clypeus, the form of the apical margin variable. Maxillary palpi six-jointed, the joints subequal; the coriaceous line dividing the galea is near the apex and almost parallel to the apical margin, which is not rounded. Labial palpi four-jointed. The maxillæ and labium smooth, without hairs.

Type of the genus : *T. dentatus*, Fabricius.

Geographical distribution of species. — Australia, New Guinea and the adjacent islands, the Moluccas, Celebes, and Luzon. Twenty species have been described.

1. *T. albopilosellus*, Cameron, Tijdschr. v. Ent. Vol. 49, p. 215 (1906), ♂. — New Guinea.
2. *T. atratus*, Smith, Journ. Proc. Linn. Soc. Lond. Zool. Vol. 6, p. 51, no. 1 (1861), ♂ ♀. — Gilolo.
3. *T. brenchleyi*, Smith, in Brenchley, Cruise of the Curaçao, p. 456 (1873), ♂. — Eastern Australia.
   T. brenchleyi, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 204 (1908), ♀.
4. *T. brisbanensis*, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 145 (1909), ♂. — South Queensland.
5. *T. darwiniensis*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 206 (1908), ♂. — Port Darwin.
6. *T. dentatus*, Fabricius, Syst. Ent. p. 360 (1775), ♂. — **Pl. 2, Fig. 35, 36, 54; Pl. 4, Fig. 93, 94.** — North Queensland.
   T. dentatus, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 199 (1908), ♀.
7. *T. elgneri*, Turner, ibidem, p. 207 (1908), ♂. — North Queensland.
8. *T. emarginatus*, Fabricius, Syst. Ent. p. 360 (1775), ♂. — Eastern Australia.
9. *T. erraticus*, Smith, Journ. Proc. Linn. Soc. Lond. Zool. Vol. 4, Suppl. p. 114 (1860), ♂. — Batchian.
10. *T. lugubris*, Smith, ibidem, Vol. 7, p. 25 (1863), ♂. — Ceram.
11. *T. luzonicus*, Turner, Trans. Ent. Soc. Lond. p. 65 (1908), ♂. — Luzon.
12. *T. olivaceus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 251 (1908), ♂. — New Guinea.
13. *T. pedestris*, Fabricius, Syst Ent. p. 354 (1775), ♀. — Eastern Australia.
14. *T. placidus*, Smith, Journ. Proc. Linn. Soc. Lond. Zool. Vol. 7, p. 26 (1863), ♂. — Waigiou.
15. *T. pulchralis*, Smith, Cat Hym. Brit. Mus. Vol. 7, p. 68 (1859), ♂. — Eastern Australia.
   T. pulchralis, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 200 (1908), ♀.
16. *T. pullatus*, Smith, Journ. Proc. Linn. Soc. Lond. Zool. Vol. 7, p. 26 (1863), ♂. — Bouru.
17. *T. sabulosus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 208 (1908), ♀. — North Australia.
18. *T. serriger*, Sharp, Willey's Zool. Results, Vol. 4, p. 388 (1900), ♀. — New Britain.
19. *T. ventralis*, Smith, Trans. Ent. Soc. Lond. (3), Vol. 2, (5), p. 389 (1865), ♂ ♀. — **Pl. 2, Fig. 33, 34.** — North West Australia.
   T. ventralis, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 201 (1908), ♀.
   var. desiccatus, Turner, Ann. Mag. Nat. Hist. (8), Vol. 3, p. 146 (1909), ♂ ♀. — Central Australia.
20. *T. zonatus*, Guérin, in Duperrey, Voy. Coquille, Zool. Vol. 2 (2), p. 222 (1839), ♂. — North West Australia.

47. Genus ISWAROIDES, Ashmead

Iswaroides. Ashmead, Journ. New York Ent. Soc. Vol. 7, p. 50 (1899).

I have not seen specimens of this genus, and Ashmead does not seem to have given any description of the single species included in it beyond that contained in the definition of the genus. I therefore give a description collected from his table of genera in *The Canadian Entomologist*, Vol. 35, p. 98-104 (1903).

Characters. — *Female.* — Pygidium not very narrow, oblong, roundet at apex; basal segment of abdomen without a strongly curved furrow on each side or a strong transverse furrow before the apex. Head seen from above triangular. Eyes small, oval, extending to base of mandibles; clypeus very short, truncate; mandibles falcate, pointed at apex, maxillary palpi four-jointed, labial palpi three-jointed; second segment of abdomen with two transverse folds or carinæ towards apex.

Male. — Hypopygium quinque-dentate or with five spines. Clypeus anteriorly not much produced, rounded, without a tooth at the basal lateral angles. Metathorax with a median tooth at apex; abdomen longer than head and thorax united, cylindrical, the sides parallel, the segments constricted at apex, immaculate; maxillary and labial palpi both four-jointed.

Type of the genus : *I. koebelei*, Ashmead.

Geographical distribution of species. — Australia.

1. *I. koebelei*, Ashmead, Journ. New York Ent. Soc. Vol. 7, p. 50 (1899), ♂♀. Australia.

* * *

Genus GLYPTOMETOPA, Ashmead

Glyptometopa. Ashmead, Psyche Vol. 8, p. 251 (1898).

Characters. — *Female.* — « Body smooth, polished, unpunctate, clothed with very sparse, long, yellowish white hairs. Head viewed from above quadrate, a little wider than long, with a long curved sulcus on each temple above the eye, the sulcus fringed with long hairs. Ocelli wanting. Mandibles bidentate. Eyes not large, oval, placed at the anterior angles of the head and almost touching the base of the mandibles. Maxillary palpi six-, labial palpi four-jointed. Atennæ twelve-jointed, short; the scape dilated, with a tuft of bristles above, and as long as the pedicel and the first two joints of flagellum united; the flagellum is about as long as the head is wide, pedicel shorter than the first flagellar joint, the latter being shorter and slenderer than the following joints, the last joint the longest, as long as the pedicel and the first joint of flagellum united. Thorax two and a half times as long as wide, divided into three parts, the pronotum quadrate, the anterior angles a little rounded and as long as the metathorax, the scutellum not differentiated; metathorax viewed from above trapezoidal, the posterior face and sides perpendicularly truncate. Legs fossorial, the middle and hind legs armed with short spines on anterior face, with longer spines at apex; tibial spurs 1-2-2; tarsi long, each pair gradually increasing in length, the hind pair being the longest, the joints armed, with spines, claws simple. Abdomen subsessile, long, subcylindrical, much longer than the head and thorax united, six-segmented, the second segment the longest, wholly smooth and polished and clothed with long sparse hairs ».

Male unknown.

Type of the genus : *G. americana*, Ashmead.

Geographical distribution of species. — California. Only one species is known.

1. *G. americana*, Ashmead, Psyche, Vol. 7, p. 251 (1898), ♀. California.

I do not place the above genus in any of the subfamilies, as I consider it very doubtful if it really belongs to the *Thynnidae*, although the thorax is similarly divided. The mesopleuræ do not show any dorsal surface as in the *Rhagigasterinae*, to which it approximates more nearly in other respects than to the other subfamilies. But there can be no certainty as to its correct position until the male is known, which may possibly show some affinity to *Brachycystis*.

I append a list of the species which I cannot assign to any of the genera, either owing to the insufficiency of the original description, or the want of sufficient material to show their position or to found new genera for them.

Australian species :

1. *Thynnus* (*Zeleboria*) *agnatus*, Turner, Proc. Linn. Soc. N. S. Wales, Vol. 33, p. 103 (1908), ♀. North Queensland.
2. *T. humilis*, Erichson, Arch. f. Naturg. Vol. 8 (1), p. 264 (1842), ♀. Tasmania.
3. *T. tenuatus*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 31 (1859), ♂. South Western Australia.
4. *Elaphroptera servillei*, Lepeletier, Hist. Nat. Ins. Hym. Vol. 3, p. 571 (1845), ♂. Australia.

South American species :

1. *Thynnus amplipennis*, Smith, Cat. Hym. Brit. Mus. Vol. 7, p. 53 (1859), ♂. South Brazil.
2. *T. gratiosus*, Smith, ibidem, p. 52 (1859), ♂. South Brazil.
3. *T. histrio*, Klug, Physik. Abhandl. Akad. Wiss. Berlin, 1840, p. 33 (1842), ♂. South Brazil.
4. *Elaphroptera cribraria*, Fox, Proc. Acad. Nat. Sc. Philad. Vol. 50, p. 73 (1898), ♀. South Brazil.
5. *Agriomyia vagans*, Smith, Proc. Zool. Soc. Lond. p. 83 (1877), ♀. Charles Island, Galapagos.

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flavipennis, Smith	43
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EXPLANATION OF PLATES

PLATE I

Fig. 1. *Chrysothynnus inca*, Turner, ♂, Labrum.
— 2. *Spilothynnus peruvianus*, Turner, ♂, Labrum.
— 3. — — — ♂, Mandible.
— 4. *Elaphroptera scoliaeformis*, Haliday, ♂, Labrum.
— 5. — — — ♂, Hypopygium.
— 6. — — — ♂, Mandible.
— 7. — — — ♀, Maxilla and palpus.
— 8. *Dimorphothynnus morio*, Westwood, ♂, Labrum.
— 9. — — — ♂, Maxilla and palpus.
— 10. — — — ♂, Hypopygium.
— 11. — — — ♀, Maxilla and palpus.
— 12. *Diamma bicolor*, Westwood, ♀, Labium and palpi.
— 13. — — — ♀, Maxilla and palpus.
— 14. — — ♂, Labrum.
— 15. *Eirone grandiceps*, Turner, ♂, Maxilla and palpus.
— 16. *Tachynomyia abdominalis*, Guérin, ♂, Labium and palpus.
— 17. — *senex*, Smith, ♂, Labrum.
— 18. — — — ♂, Maxilla and palpus.
— 19. *Ariphron petiolatus*, Smith, ♂, Labrum.

Fig. 20. *Rhagigaster unicolor*, Guérin, ♂, Hypopygium.
— 21. *Agriomyia maculata*, Guérin, var. *variegata*, Klug, ♂, Hypopygium.
— 22. — — — — ♂, Labrum.
— 23. *Epactiothynnus opaciventris*, Turner, ♂, Hypopygium.
— 24. — — — ♂, Labrum.
— 25. *Acanthothynnus sannae*, Turner, ♂, Labrum.
— 26. — — — ♂, Hypopygium.
— 27. *Megalothynnus poultoni*, Turner, ♂, Hypopygium and claspers.
— 28. — — — ♂, Hind femur.

Plate 2

Fig. 29. *Hemithynnus crinitus*, Turner, ♂, Labrum.
— 30. *Lophocheilus froggatti*, Turner, ♂, Labium and palpi.
— 31. *Zaspilothynnus vernalis*, Turner, ♂, Hypopygium.
— 32. — — — ♂, Maxilla and palpus.
— 33. *Thynnus ventralis*, Smith, ♂, Labrum.
— 34. — — — ♂, Labium and palpi.
— 35. *Thynnus dentatus*, Fabricius, ♂, Apex of abdomen, ventral surface.
— 36. — — — — dorsal surface.
— 37. *Eucyrtothynnus lateralis*, Klug, var. ♀, Pygidium.
— 38. *Glaphyrothynnus flavescens*, Smith, ♀, Pygidium.
— 39. — — — — side view.
— 40. *Agriomyia rotundiceps*, Smith, ♀, Pygidium.
— 41. *Epactiothynnus opaciventris*, Turner, ♀, Pygidium.
— 42. *Elidothynnus melleus*, Westwood, ♀, Pygidium.
— 43. *Gymnothynnus gilberti*, Turner, ♀, Pygidium.
— 44. *Acanthothynnus sannae*, Turner, ♀, Pygidium.
— 45. *Catocheilus perplexus*, Smith, ♀, Pygidium.
— 46. *Megalothynnus poultoni*, Turner, ♀, Pygidium.
— 47. *Hemithynnus apterus*, Olivier, ♀, Pygidium.
— 48. *Lophocheilus obscurus*, Klug, ♀, Pygidium.
— 49. *Leptothynnus purpureipennis*, Westwood, ♀, Pygidium.
— 50. *Lestricothynnus nubilipennis*, Smith, ♀, Pygidium.
— 51. *Campylothynnus flavopictus*, Smith, ♀, Pygidium.
— 52. *Thynnoides gracilis*, Westwood, ♀, Pygidium.
— 53. *Tachynothynnus shuckardi*, Guérin, ♀, Pygidium.
— 54. *Thynnus dentatus*, Fabricius, ♀, Pygidium.

Plate 3

Fig. 55. *Diamma bicolor*, Westwood, ♂.
— 56. — — — ♀.
— 57. *Dimorphothynnus dimidiatus*, Smith, ♂.
— 58. — — — ♀.
— 59. *Rhagigaster laevigatus*, Smith, ♂.

Fig. 60. *Rhagigaster laevigatus*, Turner, ♀.
— 61. *Eirone castaneiceps*, Turner, ♂.
— 62. — *lucidula*, Turner, ♀.
— 63. — — — ♂.
— 64. *Ariphron rigidulus*, Turner, ♂.
— 65. — *bicolor*, Erichson, ♀.
— 66. *Tachynomyia anthracina*, Smith, ♂.
— 67. — — ♀.
— 68. *Chrysothynnus inca*, Turner, ♂.
— 69. *Eucyrtothynnus avidus*, Turner, ♂.
— 70. — — — ♀.
— 71. *Spilothynnus bituberculatus*, Turner, ♂.
— 72. — — — ♀.
— 73. *Parelaphroptera rollei*, Turner, ♂.
— 74. *Oncorhinus xanthospilus*, Shuckard, ♂.

PLATE 4

Fig. 75. *Zeleboria nitidula*, Turner, ♂.
— 76. — — — ♀.
— 77. *Glaphyrothynnus xanthorrhoei*, Smith, ♂.
— 78. — — — ♀.
— 79. *Epactiothynnus opaciventris*, Turner, ♂.
— 80. — — — ♀.
— 81. *Æolothynnus illustris*, Kirby, ♂.
— 82. *Doratithynnus doddii*, Turner, ♂.
— 83. — — — ♀.
— 84. *Agriomyia luctuosa*, Smith, ♂.
— 85. — — — ♀.
— 86. *Hemithynnus crinitus*, Turner, ♂.
— 87. — — — ♀.
— 88. *Elidothynnus basalis*, Smith, ♂.
— 89. — — — ♀.
— 90. *Zaspilothynnus picticollis*, Turner, ♀.
— 91. — *excavatus*, — ♂.
— 92. — — — ♀.
— 93. *Thynnus dentatus*, Fabricius, ♂.
— 94. — — — ♀.

London, S. W., 31th March 1910.

DIPTERA

FAM. MUSCARIDÆ

SUBFAM. ULIDIINÆ

DIPTERA

FAM. MUSCARIDÆ

SUBFAM. ULIDIINÆ

von Friedrich HENDEL

MIT 4 COLORIERTEN TAFELN

VORWORT

Die älteste Gattung unserer Subfamilie ist das gut begründete und berechtigte Genus *Chrysomyza*, das Fallén schon im Jahre 1810 unter dem præokkupierten Namen *Physiphora* beschrieb und deshalb 1817 umtaufte. Historisch interessant bleibt dabei, dass der grosse nordische Entomologe die Verwandtschaft dieses kosmopolitischen Dipterons so wenig erkannte, das er es 1810 zu den Syrphiden, 1817 aber zu *Scenopinus* stellte.

Seine Gattung wurde von den Dipterologen der Mitte des vorigen Jahrhunderts nicht anerkannt. Meigen erweitert den Gattungsbegriff auch auf die Arten mit « narbiger » Stirne und gibt dieser Gattung den Namen *Ulidia*, weil *Chrysomyza* nicht auf alle Arten passe. Unserem Altmeister folgen dann Macquart, Falléns Landsmann Zetterstedt, ja anfangs sogar Loew. Erst später findet letzterer die Gattung *Chrysomyza* für berechtigt, um bei dieser Gelegenheit Schiner eins am Zeuge zu flicken, der sie unnötiger Weise mit dem neuen Namen *Chloria* belegt und als gute Gattung erkannt hatte.

Noch zwei Jahre bevor Meigen seine Gattung *Ulidia* begründete, schuf Wiedemann sein Genus *Timia*, welches das merkwürdige Unglück hatte, von allen Autoren, Meigen, Macquart, Loew, Schiner und Rondani verkannt und missdeutet zu werden. Keiner dieser Autoren bekam eine echte *Timia*-Art zu Gesicht und Loew beschrieb die schlankeren, kleineren Formen als neues Genus *Empyelocera*, eine Gattung, die nach unserer heutigen Artenkenntnis nicht zu halten ist.

Den Gruppennamen *Ulidini* finden wir zum ersten Male in Macquarts *Hist. Natur. Diptères*, Vol. 2, p. 498, freilich für ein Gattungsgemisch — *Actora*, *Coelopa*, *Lipara*, *Ulidia* — das diesen Namen

nicht im Entferntesten verdient. Doch auch die acht Jahre später herausgegebenen *Diptères Exotiques* zeigen keinen Fortschritt in der systematischen Erkenntnis. Im Volumen 2 (3) finden wir die Gruppe *Ulidini* überhaupt nicht mehr und *Ulidia* bei den Lauxaniinen untergebracht.

Die sich um *Ulidia* gruppierenden verwandten Formen fasste Schiner als der Erste zusammen und erteilte dieser Abteilung den alten Macquart'schen Namen *Ulidinae*. Aber erst Loew gab durch seine auf viel breiterer Basis ausgeführten Untersuchungen über die Arten aller Zonen unserer Gruppe oder Subfamilie ihren heutigen Umfang.

In seiner bekannten kleinen Arbeit *Die europäischen Ortalidae* (1868) teilt Loew die ganzen *Ortalididae* in zwei Abteilungen; bei der ersten ist die Subkosta beborstet oder doch deutlich behaart, bei der zweiten ganz nackt. In der zweiten unterschied er 1868 die zwei Gruppen der *Ulidina* und *Richardina* dadurch, dass die Schenkel der ersteren unbewehrt, die der zweiten aber bedornt sein sollen. Im 3. Volumen der *Monographs of N. Amer. Dipt.* modifizierte dann Loew diese Verteilung der Gattungen dahin, dass er solche mit unten abgerundeter Analzelle den Richardiinen, solche mit spitzer oder scharfer Analzelle jedoch den Ulidiinen zuzählte. Ohne Zweifel wird dadurch die Einteilung der Formen eine natürlichere, denn die Gattung *Epiplatea*, Loew, ist doch ebenso unzweifelhalt eine *Richardiine* wie das Genus *Coniceps*, Loew, die beide unbewehrte Schenkel haben. Anderseits findet man bei Arten der Gattungen *Chrysomysa*, Fallén, und *Timia*, Wiedemann, also bei typischen Ulidiinen, bedornte Schenkel.

Aber auch die neue Absteckung der Gruppengrenzen durch Loew lässt noch keine natürliche Einteilung der *Ortalididae* im weiteren Sinne zu. Die von mir neu errichtete Gattung *Eumecosomyia* ist doch ihrer ganzen Organisation nach unanfechtbar eine Ulidiine, und hat eine ganz abgerundete Analzelle, die Analader fehlt vollständig. Es liegt eben bei dieser Gattung eine ganz eigentümliche Entwicklungsrichtung zur Reduzierung der Basalzellen, der Analader und des Axillarlappens vor, die mit der Bildung dieses Flügelteiles bei den Richardiinen nichts gemein hat, also gar nicht verglichen werden kann.

Es gibt also die kurze Diagnostik : Was eine runde Analzelle hat, ist eine Richardiine, eine ebenso künstliche Verteilung der Formen, wie *die Nacktheit oder Kahlheit der Subkosta*.

Ich habe schon im 96. Faszikel der « Genera Insectorum » bei der Bearbeitung der Pterocallinen darauf hingewiesen, dass viele typische Formen dieser Subfamilie eine nackte Subkosta haben. Ich zähle hier nur *Pterocalla plumitarsis*; *Myennis appendiculata*, *zebra* und *nigra* auf. Wer würde die Fliegen oder die Arten des Loew'schen Genus *Dasymetopa*, Prototype der Pterocallinen, für Ulidiinen halten? Von Grenzformen wie *Chondrometopum*, *Megalaemyia* und *Ophthalmoptera* will ich dabei noch ganz absehen! 1)

Eine gleich unnatürliche Gliederung würden auch die Richardiinen und Ulidiinen geben, hielte man sich strikte an diesen Einteilungsgrund. Wir finden Ulidiinen mit beborsteter Subkosta — ja sogar schon unter den von Loew selbst beschriebenen Gattungen und Arten — und müssen Formen aus den Gattungen *Automola*, Loew, *Mischogaster* und *Odontomera*, Macquart u. s. w. trotz der beborsteten ersten Längsader zu den Richardiinen bringen, wollen wir auf ein natürliches System nicht verzichten.

Ich will damit Loew's Verdiensten, die ja über allen Zweifel erhaben sind, keineswegs nahe treten, sondern nur meine Meinung über die vielleicht sehr nützliche, keineswegs aber natürliche Gruppierung unserer Fliegen in seinem Sinne aussprechen.

Eine weitere Förderung unserer Kenntnis der Ulidiinen verdanken wir Loew dadurch, dass er das ihm zugängliche alte und neue Material und die von Wiedemann und Macquart in den Gattungen *Ortalis*, *Ceroxys*, *Urophora* u. s. w. beschriebenen Arten in scharf präzisierte Gattungen unterbrachte, neu beschrieb und gut illustrierte, wodurch eine sichere Determinierung erst ermöglicht wurde. Aber

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1) Zur Veranschaulichung habe ich Flügel der Gattungen *Ophthalmoptera* (**Taf. 3, Fig. 93**) und *Dasymetopa* (**Taf. 1, Fig. 95, 96**) dieser Arbeit beigefügt. Ebenfalls (**Taf. 4, Fig. 102-104**) die Kopfabbildung einer neuen *Tetanops*-Art (*Aldrichi*, nov. sp.), die leicht mit einer Ulidiine verwechselt werden kann.

auch extensiv bereicherte Loew unsere Kenntnis sehr, namentlich was die amerikanischen Formen anbelangt.

Röder gab in der *Berl. Ent. Zeitschr.*, Vol. 25, p. 209 (1881) ein kurze « Uebersicht der Europäischen Ulidinen ».

Uber die Gattung *Timia* berichteten Röder, Mik, Becker und ich.

Mit amerikanischen Formen befassten sich Coquillett, Van der Wulp und in jüngster Zeit Cresson.

Als Vorbareiten für die « Genera Insectorum » veröffentlichte ich 1909 einige Uebersichten über die Arten der meisten Gattungen. Die Zitate darüber findet man hier am entsprechenden Orte.

Man könnte mich auch fragen, warum ich die Subfamilie nicht nach der ältesten Gattung *Chrysomyzinae* genannt habe. Dem möchte ich entgegnen, dass solche Benennungen vielleicht Brauch, aber nicht Gesetz sind und ich es vorziehe, den Namen einer Familie von der für sie typischen Gattung abzuleiten. Nun ist zwar *Chrysomyza* nicht weniger typisch als *Ulidia*, der Name *Ulidiinae* aber schon eingebürgert, weshalb ich ihn ohne Nötigung nicht ändern will.

Die geographische Verbreitung der Gattungen und Arten ist sehr interessant. Die Gattung *Chrysomyza* ist in Afrika am zahlreichsten entwickelt, sieben Arten, und ist die einzige Ulidiinen-Gattung des « dunklen Weltteiles ». Die paläarktische Region besitzt drei, die orientalische zwei Arten davon. Eine Spezies ist kosmopolit. Ausser den *Chrysomyza*- und den *Seoptera*-Arten, die noch Nord-Amerika von Europa erhielt, sehen wir in der paläarktischen Region die in ihr endemischen Gattungen *Timia* (28 Arten) und *Ulidia* 1) (10 Arten), während anderseits die nearktiche und neotropische Region eine ganze Reihe ihr eigener, sonst nirgends vorkommender Formen enthält und den grössten Reichtum an verschieden spezialisierten Gestalten aufweist. Auffallend bleibt dabei, dass die Formen der alten Welt ihr Gepräge durch die in scharf umrissenen Antennengruben halb versteckten Fühler erhalten, während die grosse Masse der neuweltlichen Ulidiinen sich durch den Besitz unterer Frontorbitalborsten charakterisiert. Eine Gattung mit amerikanischen Anklängen besitzt die orientalische Region

Der Zahl nach finden wir :

in der paläarktischen Region	4 Gattungen	mit	43	Arten,
in der nearktischen »	11 »	»	26	»
in der neotropischen »	16 »	»	81	»
in der æthiopischen »	1 Gattung	mit	7	» , und
in der orientalischen »	2 Gattungen	mit	3	»

Zum Schlusse möchte ich allen Faktoren, welche durch Uebersendung von Studienmaterial meine Arbeit tatkräftig gefördert und es mir dadurch ermöglicht haben, Originalstudien zu machen, meinen wärmsten Dank auch hier aussprechen.

Von öffentlichen Museen sind es diejenigen von Budapest, Genua, Washington und Wien. In denselben die Herren D. W. Coquillett, Dr R. Gestro, A. Handlirsch und Dr C. Kertész.

Von Privaten unterstützten mich mit grosser Liebenswürdigkeit die Herren Prof. M. Bezzi, B. Lichtwardt und W. Schnuse. Wie sehr die Kenntnis der südamerikanischen Dipteren-Fauna durch die Forschungen und Sammlungen des letztgenannten Dipterologen erweitert wurde, wird eigentlich erst die Zukunft so recht zeigen. Bis jetzt sind ja nur kleine Bruchteile seines Materiales verarbeitet worden!

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(1) Die nordamerikanische *Ulidia rubida*, Loew, ist nur fraglich eine *Ulidia*!

BIOLOGIE

Brauer charakterisiert in seiner « Larvenarbeit » (*Zweiflügler des Kaiserl. Museums zu Wien*, Pt. 3, 1883) p. 39, die Larven der Ulidiinen wie folgt :

« Larve kegelig, querrunzelig, glänzend, vorne dünner, stumpf, hinten gerade abgestutzt. Mundhaken getrennt; Vorderstigmen breit, hinterer Stigmenträger fast rautenförmig, jederseits mit drei Stigmenspalten. After herzförmig eingedrückt. Larva pupigera elliptisch, vorne schmäler, querrunzelig. » (*Chloria demandata*, Bouché.)

Im Folgenden gebe ich eine Zusammenstellung dessen, was über die Biologie einiger Arten bekannt gemacht wurde :

Chrysomyza demandata, Fabricius

1. Bouché, *Naturgeschichte der Insekten*, p. 98 (1834).

« *Ulidia demandata* : Die Larve ist kegelig, querrunzlig, glänzend glatt, vorn etwas stumpf, hinten gerade abgestutzt. Der zweiteilige Kopf hat gleiche, gekrümmte Oberkiefer. Die Prothoraxstigmata sind breit, braungelb, mit schwarzbraunem Mittelpunkte. Aftersegment gerundet. Die Stigmatenträger fast rautenförmig, mit gedreiten Stigmen. Die Aftergegend hat einen herzförmigen Eindruck. Länge 3 Linien. Man findet sie in Gärten gesellig, zu Tausenden im alten Pferdedünger, den Herbst und Winter hindurch. Sie verpuppt sich im Frühjahr.

» Die Puppe ist ein rotbraunes, elliptisches, vorn verschmälertes Tönnchen, das fein in die Quere gestrichelt ist. Das Kopfende ist sehr uneben, geringelt, mit vorstehenden Seitenleisten. Der stumpfe Afterabschnitt ist gerunzelt und hat schwarze Stigmatenträger. »

2. Dr H. Scholtz, « Ueber dem Aufenthalt der Dipteren während ihrer ersten Stände », *Zeitschr. f. Ent.* Breslau, 1845 (1. Quart. N° 9, p. 10), *Ulidia demandata*, im Pferdemist (Bremi, « Beitr. zur Kunde der Dipteren », *Isis*, 1846, J. 3).

3. Mik, *Wien. Ent. Zeit.* Vol. 15, p. 241 (1896), teilt mit, dass die Larven in Menge in Trifen von gährendem Grünfutter (*Trifolium pratense*) in Ungarn gefunden und die Fliege daraus gezogen wurde.

Mik beobachtete auch mehrmals, wie der Bücherskorpion sich mit einer Schere am Hinterbeine der Fliege festhielt und sich so in die menschlichen Behausungen tragen liess.

4. Mik, ibidem, Vol. 2, p. 160 (1883) berichtet über eine Pflanze, *Desmodium triquetrum*, D. C. aus Ostinden, im Berliner botanischen Garten, an deren Haaren, die wie Angelhaken gebogen sind, sich immer nur *Chrysomyza demandata* fieng. Mik meint, hieran sei namentlich das eigentümliche Spiel der Vorderbeine bei dieser Fliege schuld.

5. Rondani, « Stirps Tanipezinæ », *Bull. Soc. Ent. Ital.* p. 5 (1874) :

« Larvæ a me observatæ, gregariæ in fimo bovino, subaurantiacæ, nudæ, capite variabili fusco. Imagines ab iisdem domi ortas obtinui. »

Timia erythrocephala, Pallas

Pallas berichtet in *Wiedemann's Aussereur. Zweiflügler*, Vol. 2, p. 564 : « In floribus præsertim Nitrariæ et Tamaricis ad Jaicum et Volgam in australibus desertis frequens, forte e Salicorniarum gallis vel radicibus nata. »

Seoptera vibrans, Linné

1. Dr H. Scholtz, « Ueber den Aufenthalt der Dipteren während ihrer ersten Stände », *Zeitschr. f. Ent.*, Breslau, 1849 (1. Quart. N° 9, p. 10) :

« *Ortalis vibrans* erzog ich selbst in Menge aus Pferdemist, der mit Erde gemischt war. »

2. Mik, *Wien. Ent. Zeit.* Vol. 7, p. 94 und 111 (1888).

Der Autor berichtet, dass Sintenis in Livland unsere Fliege aus Pferdemist zog. 1885 teilte Prof. Girschner Mik mit, dass er *Seoptera vibrans* aus feuchter Gartenerde zog (Zettelnotiz).

Auch ich kann bestätigen, dass mir zahlreiche Fliegen aus einem mit gut gedüngter Gartenerde gefüllten Kistchen im Juni entschlüpften.

3. Karsch, *Berl. Ent. Zeitschr.*, Vol. 31, p. 28, Sitz. Ber. (1887).

Karsch erhielt von Dr Nitsche aus Tharand (Sachsen) eine *Myodina vibrans*, Linné, samt Puppe. Nach Mitteilung des Einsenders ist die Made derselben in den Stengeln von *Dianthus carthusianorum* schädlich aufgetreten.

Euxesta, Loew

1. Brues, « Notes on the larvæ of some Texan Diptera » (*Euxesta nitidiventris*, Loew) *Psyche*, Vol. 9, p. 353 (1902) (**Taf. 2, Fig. 44, 45**) :

« A very large number of fully grown larvæ which proved to belong to this species were found beneath the bark of a dead pecan tree (*Carya pecan*) during the month January. They were clustered together in groups of a hundred or more individuals, their bodies adhering together on account of their very sticky consistency. The greater number of the larvæ were seen at a distance of 5 or 6 feet above the surface of the ground. Their habitat is like to that of one of the European Ortalinæ, *Psairoptera*, which has been found under the bark of pine trees. (Zetterstedt, *Dipt. Scand.* Vol. 6, p. 2265.)

» *Larva.* Length 4-6 mm. Body composed of eleven segments, narrow and somewhat pointed anteriorly, gradually enlarged posteriorly, the apex rounded. Mouth parts very retractile, the hooks separated. Head nearly as long as the first two thoracic segments together. Body segments without any distinct ambulatorial projections, the segments being only slightly produced ventrally at the margins. The anal segment bears two subdorsal papillæ on the sides of which the stigmata are situated.

» The larval habits of this species are quite different from those of the closely related *E. notata*, Wiedemann, which was bred by Riley from larvæ found in the pulps of an Osage orange. The larva of an European genus of Ulidinæ which has been described by Brauer is quite similar to that of *Euxesta*. »

2. Smith, « Larval food of *Euxesta notata* », *Insect Life*, Vol. 6, p. 270 (1894) :

« Reared from Onions, from larvæ in pulp of Osage orange, from cotton bolls from Alabama, from Sumach fruit from Virginia, from bolls of *Solanum carolinense* in the district of Columbia, from Osage oranges in Missouri; Coquillett from Apple previously infested by Codling Moth in California. »

3. Howard, « Insect Fauna of *Human excrement* », *Proc. Wash. Acad. Sc.* Vol. 2, p. 585 (1900), *Euxesta notata*, Wiedemann :

« It has previously been rared from Onions, cotton bolls, Osage orange fruit and apples previously infested by Codling Moth; probably only follows work of other insects in such cases. It was reared in Washington, district of Columbia, June 8, 1899, from faeces exposed May 12, for six hours. It was also collected May 16, on a fresh deposit exposed for 15 minutes. »

Chætopsis ænea, Wiedemann

1. Thomas W. Fyles, « Note on the predatory habits of *Chaetopsis aenea* », Wiedemann (*The Canad. Entom.*, Vol. 21, p. 236 [1889]).

« In the beginning of July last I discovered in a bed of *Typha latifolia*, in the neighbourhood of Montreal, a large number of the larvæ of *Arzama obliqnata*. I have visited the spots repeatedly, and have had the larvæ under daily observation. One remarkable circumstance concerning them is that they are liable to attacks from the maggots of a fly belonging to the Ortalidæ : *Chaetopsis aenea*, Wiedemann. I found that larvæ, in the proportion of about one in every six, had been overcome by these maggots. Some of the victims were quite dead ; some were still writhing As many as twenty maggots were feeding on one caterpillar, draining away its juices. They were of the usual form, pointed at one end and truncated at the other. When mature, their length was about seven-sixteenths of an inch. I raised a great number of them, feeding them upon injured *obliquata* larvæ. The pupal stage lasted about ten days ; and all through August the flies continued to make their appearance. »

2. Howard, « An Ortalid fly (*Chaetopsis aenea*, Wiedemann), injuring, growing cereals, » *Insect Life*, Vol. 7, p. 352 (1895) (**Taf. 2, Fig. 35, 36**).

« The larva of this insect lives in a cavity which it forms within the stems of different cereal plants, including wheat, oats, corn, and sugar-cane. It works, as a general thing, near the base of the young growing plant, and either kills it outright or interferes with its growth to such an extent that it never perfectly matures. The eggs are laid in the leaf sheath, and the larva transforms to pupa in the same position.

» The larvæ were found about the middle of June in an oat field, and had the effect of killing the blades at the base, making the field appear in patches. The eggs were found on May 9 of the same year, and from his notes we learn that they are inserted just under the edge of the leaf sheath in groups of two, three and five, and also singly. The eggs is of a pure pearly white color, five times as long as broad, and tapering to a point at each end. The larvæ, after hatching, distribute themselves along under the sheath, ten to fifteen under one sheath, thus exhausting the juices of the plant, the outer leaves first becoming brown and seared, and the whole stalk finally withering away. The puparia are formed under the sheath, although in two instances the larva had eaten a slit into the blade, inserted its body part of the way, and there transformed into a puparium.

» In April 1894 specimens of a young sugar-cane plant were received through the Division of Chemistry, to which Division it head been sent with the information that about 5 % of the sprouts were affected by an insect, which proved upon examination to be the larva of this species.

» The infested plant was kept under observation in the insectary and the adult flies issued from April 28 to May 5. In August 1893 specimens of the adult insect were received from Prof. Gilette of Ames, Jowa, who wrote that they had been reared from larvæ found boring in the center of a stalk of corn ot July 5. (*Insect Life*, Vol. 2, p. 281).

» We known nothing of the method of hibernation of this insect. Its transformations are rapidly accomplished and there are probably several annual generations. In the first sugar-cane case mentioned, the work of the larva followed damage by another insect, but there seems no doubt that the species frequently and perhaps normally attacks healthy plants. »

Allgemeine Morphologie der Subfamilie. — Kopf im Allgemeinen von rundlichem Aussehen, meist wenig breiter als der Thorax, selten aufgedunsen, blasig, nie *Achias*-artig verbreitert. Stirne von sehr wechselnder Breite, parallelrandig, oder wenn verengt, so gegen den Scheitel zu. Lunula meist

deutlich sichtbar. Stirnhartteile wenig entwickelt : Ozellenplatte klein und kurz, meist ganz oben an der Scheitelkante im oberen Stirndrittel liegend, ausnahmsweise (*Siopa*) weit nach vorne reichend; Scheitelplatten höchstens fast bis zur Stirnmitte vorgezogen, schmal, in der Regel dem Augenrande anliegend, seltener (*Notogramma*) etwas davon entfernt. In vielen Fällen sind besonders beborstete Wangenplatten der Stirne deutlich zu erkennen (amerikanische Formen).

Der Klypeus ist niedrig, nie viel höher als seine grösste Breite beträgt, unten so breit wie oben oder breiter, nie verengt; im Profile ist er fast gerade, meist aber konkav oder winkelig gebrochen, seltener konvex (*Œdopa*, *Paroedopa*, *Stictomyia*). Gewöhnlich tritt das Epistom unter einer Querfurche oder Rinne mehr weniger stark vor. Bei *Cenchrometopa* ist der untere Teil des Untergesichtes der Quere nach ausgehöhlt. Die Spaltenäste entfernen sich nie weit von den Gesichtsleisten. Diese stossen an der Grenze zwischen Epistom und Klypeus, neben den Stirnspaltenenden mit den fast ausnahmslos bewimperten Backenleisten unter verschieden deutlichen, nie mit Vibrissen versehenen Ecken zusammen. Scharf abgegrenzte, tiefe Fühlergruben zeigen nur die paläarktischen Gattungen *Timia* und *Ulidia*. Deutliche Längsrinnen findet man bei *Seoptera*, weniger deutliche bei *Chrysomyza* und einigen *Chaetopsis*- und *Hypoecta*-Arten. Nur bei *Eumetopiella*, weniger bei manchen *Chaetopsis*-Arten, springt die Stirne stärker, kegelig über die Augen vor, sonst ist der Stirnwinkel gewöhnlich ein stumpfer. Die Stirnfläche ist glatt oder grubig-runzlig, nackt bis rauhhaarig, eben bis ziemlich gewölbt, hie und da mit einer Querfurche in der Mitte und erhabenen, flachen Längswülsten versehen. Die nackten Backengruben sind meist scharf differenziert, die Backen von sehr verschiedener Breite. Unterer Hinterkopf nie stark vortretend oder gepolstert, immer mit wagrechtem Unterrande. Oberer Hinterkopf eben, in verschiedenem Grade ausgehöhlt oder sogar mässig konvex. Rüssel kurz und dick, Labellen zurückgeschlagen, breit. Kinn chitinös. Taster verbreitert. Prælabrum immer sichtbar, meist mittelgross, seltener grösser oder ganz rudimentär.

Die Augen sind nie vorgequollen. Im Profile sind sie länglich oval und meist lotrecht oder wenig schief gestellt.

Kopfborsten, mit Ausnahme der Gattung *Timia*, überall gut entwickelt. Obere Frontorbitalborsten eine oder zwei. Ozellarborsten ein Paar. Postvertikalpaar divergierend, mit den Spitzen bald nach vorne, bald nach hinten gebogen. Vertikalborsten zwei Paare oder nur das innere vorhanden. Oft ist die Krümmung und Stellung des inneren Paares für die Gattung charakteristisch. Untere Frontorbitalborsten bei den amerikanischen Formen sehr verbreitet. Vibrissen fehlen.

Fühler vorgestreckt, geneigt oder hängend, manchmal in den Fühlergruben halb versteckt, kurz bis sehr lang; erstes Glied sehr kurz, zweites nie verlängert, oben mit einer abstehenden Borste versehen. Das dritte Glied ist rund bis lang linear, vorne abgerundet oder mit einer mehr weniger deutlichen Ecke oder Spitze versehen. Die Arista ist stets nackt und steht basal.

Thorax ungefähr so lang wie breit, selten länger und schlank, vorne nie verschmälert. Prothorax unentwickelt. Quernahtäste in oder vor der Seitenmitte, schräg nach vorne aufsteigend. Quernaht breit unterbrochen. Pleuren ziemlich gleichmässig gewölbt, oft diagonal stärker gewölbt und über den Vorderbeinen eingedrückt. Hinterrücken und Postscutellum klein. Schildchen normal, nie auffallend grösser oder kleiner, meist mit vier Borsten am Rande, selten weniger.

Beborstung : Prothorakale deutlich vorhanden oder schwach, selten ganz fehlend. Eine Mesopleurale unter schwächeren Börstchen an der Naht, eine Sternopleurale. Die Gattung *Seoptera* allein macht eine Ausnahme. Auf dem Mesonotum : eine Humerale, eine plus eine Notopleurale, drei bis vier Supraalare, keine Præsuturale, ein bis zwei Paare Dorsozentralborsten ganz hinten und meist auch ein Paar Præscutellarborsten. Die kurze Grundbehaarung des Rückens fehlt selten fast ganz, ist in Längsreihen geordnet oder steht unregelmässig.

Abdomen : Aeusserlich sichtbare Segmente hat das ♂ fünf, das ♀ fünf bis sechs. Ausnahmen

findet man beim Genus *Acrosticta*. Umriss des Hinterleibes eiförmig, breit oder schlank, bis fast streifenförmig. Hypopyg klein, rundlich. Penis spiralig aufgerollt. Ovipositor flachgedrückt, dreigliedrig, von verschiedener Länge. Basalglied trapezförmig, dreieckig oder herzförmig.

Beine von normaler Grösse und Stärke. Præapikalborsten fehlen meist, selten sind sie angedeutet (*Paroedopa, Stictomyia*). Mittelschienen mit einem längeren Endsporn, nur manchmal mit einigen versehen. Mittelschenkel hinten gewöhnlich lang gewimpert.

Flügel glashell oder verschieden stark gezeichnet, gefleckt oder bandiert. Kosta unbeborstet, mit Ausnahme bei der Gattung *Aspistomella* ununterbrochen und nicht geknickt, bis zur Mündung der Diskoïdalader reichend. Mediastina völlig getrennt nach Ortalidinen-Art mündend (exclus. *Stictomyia*). Subkosta meist nackt, seltener behaart oder sogar beborstet (*Euxesta, Acrostica, Pareuxesta* etc.), gewöhnlich in der Flügelmitte, seltener weiter vor oder hinter derselben mündend. Subkostalzelle klein und kurz, wenn länger, dann sehr schmal und schlank, fast gerade. Analzelle unten in einen verschieden langen spitzen Zipfel ausgezogen, ausnahmsweise bauchig begrenzt (*Eumecosomyia*). Die erste Hinterrandzelle ist gewöhnlich deutlich, oft sehr stark verengt, manchmal sogar geschlossen und gestielt.

Diagnose der Subfamilie. — Holometope Musciden mit mittellangen Scheitelplatten oben am Augenrande und vielfach auch mit beborsteten Wangenplatten der Stirne. Fühler frei oder in Gruben versteckt. Kopf rundlich, oft aufgedunsen, aber nie von vorne her zusammengedrückt und der Quere nach verbreitert, Augen nie vorgequollen. Die glatte oder grubig-runzelige Stirne ist gewöhnlich mittelbreit; wenn sie verengt ist, so ist dies am Scheitel der Fall 1). Vibrissen fehlen. Quernahtäste des Rückens schief nach vorne aufsteigend. Prothorakale in der Regel vorhanden, ebenso eine Meso- und eine Sternopleurale. Rücken nur hinten mit Dorsozentralborsten versehen. Legeröhre flach, dreigliedrig. Penis spiralig. Subkostalzelle von normaler Grösse. Subkosta meist nackt, nie weit von der Flügelmitte entfernt mündend. Kosta bis zur Mündung der Discoïdalis. Erste Hinterrandzelle an der Mündung mehr oder weniger verengt. Körperfarbe meist glänzend und metallisch.

BESTIMMUNGSTABELLE DER GATTUNGEN

— *Fühler in scharfrandigen Gruben mehr oder weniger* zurückgezogen, *zwischen denen der Klypeus breit als buckel- oder nasenartige Leiste vorgewölbt ist* . . . . . 1.

— *Fühler* frei inseriert, *ohne allseitig differenzierte Fühlergruben* . . . . . 2.

1. *Thorax im Verhältnisse zum Kopfe auffallend klein und zart. Beborstung des Kopfes und des Thorax wohlentwickelt* (**Taf. I, Fig. 4, 11-13**) . . . . . 2. Genus Ulidia, Meigen.

— *Thorax ebenso plump voluminös wie der Kopf; beide mit reduzierter Behaarung und Beborstung* (**Taf. I, Fig. 1-3, 5-7**). 1. Genus Timia, Wiedemann.

2. *Analader fehlend oder rudimentär. Analzelle vorne völlig abgerundet, bauchig begrenzt* (**Taf. 4, Fig. 97, 98**) . . . 11. Genus Eumecosomyia, nov. gen.

— *Analzelle und Analader vollkommen fehlend. Flügel überhaupt klein und verkümmert* (**Taf. 4, Fig. 105-107**) . . . 12. Genus Steneretma, Loew.

— *Analader wohlentwickelt. Analzelle vorne nie durch eine bauchige Querader begrenzt, sondern unten mit einem verschieden stark vortretenden spitzen Zipfel oder Winkel* . . . . . 3.

1) Nicht vorne, wie bei Pterocallinen Richardiinen.

3. *Stirne glatt, ohne Querrunzeln und Hohlpunkte, höchstens mit einer seichten Vertiefung, Querfurche oder oben mit vier Längswülsten* 9

— *Stirne grubig, mit Hohlpunkten oder Querrunzeln* . . . . . 4.

4. *Augen rund und klein, nicht die Mitte der Kopfhöhe erreichend, Backen daher sehr breit. Kopf auffallend gross, Stirne sehr breit* . . . . . 25. Genus Eurycephalomyia, Hendel.

— *Backen nur schmal, bloss einen geringen Teil der Augenhöhe breit* . . . . . 5.

5. *Drittes Antennenglied linear, stark verlängert. Ozellendreieck bis nach vorne hin reichend, oben an den Schenkeln jederseits mit einer Börstchenreihe besetzt* (**Taf. 3, Fig. 67-69**) . . . 18. Genus Siopa, nov. gen.

— *Drittes Fühlerglied rundlich bis oval, nie linear verlängert. Ozellendreieck kurz, ohne diese Börstchenreihen* . . . . . 6.

6. *Cubitalis und Discoïdalis vor der Mündung nach aufwärts gebogen. Erste Hinterrandzelle an der Spitze stark verengt, merklich vor der Flügelspitze mündend. Stirne und Wangen sehr breit. Klypeus knapp über dem Mundrande der Quere nach ausgehöhlt* (**Taf. 2, Fig. 70, 71; Taf. 3, Fig. 72**) . 19. Genus Cenchrometopa, nov. gen.

— *Cubitalis nie nach aufwärts gebogen. Erste Hinterrandzelle an oder hinter der Flügelspitze mündend. Stirne nicht aussergewöhnlich breit, Wangen sehr schmal. Klypeus unten nie quer ausgehöhlt* . . . . . 7.

7. *Subkosta ganz gerade, in geringer Entfernung neben der Kosta verlaufend, unter sehr spitzem Winkel merklich jenseits der Flügelmitte mündend. Subkostalzelle daher ungemein schlank und auch lang. Radialis und die übrigen Längsadern von eigentümlicher gerader Steifheit. Erste Hinterrandzelle meist stark verengt. Scheitelkante abgerundet* (**Taf. 3, Fig. 61-66; Taf. 4, Fig. 101**) . . . . . 17. Genus Acrosticta, Loew.

— *Subkosta bogig in die Kosta mündend, Randmal von gewöhnlicher Form, nie sehr lang und schlank. Scheitelkante scharf. Radialis immer etwas geschwungen. Erste Hinterrandzelle wenig verengt* . . . . . 8.

8. *Schildchen scheinbar die Fortsetzung der Rückenfläche des Thorax bildend, ganz abgeflacht, am Rande scharfkantig. Backengruben querrunzelig. Die hinteren zwei Ozellen stehen unmittelbar an der Scheitelkante. Postvertikale fehlen. Stirne gleichmässig runzelig punktiert, ohne deutliche Orbitales inferiores* (**Taf. 3, Fig. 73-75**) . . . . . 21. Genus Notogramma, Loew.

— *Schildchen durch eine Querfurche deutlich von der Rückenfläche des Thorax getrennt, etwas emporgewölbt, am Rande abgerundet. Backengruben glatt. Die hinteren zwei Ozellen liegen ein ziemliches Stück vor der Scheitelkante, an der deutliche Postvertikale wahrnehmbar sind. Die Stirne ist an den mit deutlichen Orbitales inferiores versehenen Wangenplatten merklicher runzelig als auf der Strieme* (**Taf. 4, Fig. 80-82**) . . . . . 20. Genus Euphara, Loew.

9. *Fühler aussergewöhnlich lang und schlank, fast wagrecht vorge-*

streckt. Drittes Antennenglied stark verlängert, fast linear (Taf. 4, Fig. 89; Taf. 3, Fig. 90; Taf. 2, Fig. 91, 92) . . . . . 22. Genus STICTOMYIA, Bigot.

— *Fühler kurz und geneigt. Drittes Antennenglied nie linear verlängert* . . . . . 10.

10. *Klypeus konvex gewölbt, Epistom zurückweichend. Backen fast so breit wie die Augenhöhe. Kopf etwas aufgeblasen* . . . . . 11.

— *Klypeus gerade, konkav oder winkelig gebrochen, Epistom meist mehr weniger vortretend. Backen schmal. Kopf nie stärker aufgeblasen* . . . . . 12.

11. *Augen ungefähr so hoch wie lang. Kopf* 1) *kaum von vorne her zusammengedrückt, hinten fast eben. Hintere Querader schief und S-förmig geschwungen* (Taf. 4. Fig. 83; Taf. 3, Fig. 84) . . . . . 23. Genus ŒDOPA, Loew.

— *Augen viel höher als lang. Kopf stark von vorne her zusammengedrückt, hinten stark konkav. Hintere Querader gerade und fast senkrecht.* (Taf. 4, Fig. 85; Taf. 3, Fig. 86). . 23. Genus PARŒDOPA, Coquillett.

12. *Am Flügelvorderrande springt ähnlich wie bei* Milichia *die Kostalzelle vor der Mündung der Mediastina in Form eines spitzigen Zipfels vor. Epistom schildartig konvex vortretend* (Taf. 3, Fig. 54-57) . . . . . 16. Genus ASPISTOMELLA, nov. gen.

— *Flügelvorderrand ohne vortretenden Lappen* . . . . . 13.

13. *Kopf im Profile fast doppelt so lang wie hoch, mit stark konisch vorspringender Stirne. Der Stirnwinkel ist sehr spitz, das Untergesicht weicht geradlinig ausserordentlich stark zurück. Augen wagrecht oval* (Taf. 2, Fig. 49, 50a-b, 51) . . 10. Genus EUMETOPIELLA, Hendel.

— *Kopf so hoch wie lang oder höher. Stirnwinkel meist stumpf. Stirne nur wenig vor die Augen vortretend. Augen lotrecht oval oder höchstens so hoch wie lang* . . . . . 14.

14. *Drittes Antennenglied vorne abgerundet* . . . . . 15.

— *Drittes Antennenglied vorne oben mit scharfer Ecke oder sogar deutlicher Spitze* . . . . . 22.

15. *Kleine Querader in das Wurzeldrittel des Flügels zurückgezogen und über dem ersten Sechstel der Diskoïdalzelle stehend* (Taf. 3, Fig. 76-79) . . . . . 13. Genus AXIOLOGINA, nov. gen.

— *Kleine Querader in der Nähe der Mitte des Flügels und der Diskoïdalzelle gelegen* . . . . . 16.

16. *Analader parallel dem Flügelhinterrande auslaufend, denselben nicht erreichend. Stirne oben ausserordentlich stark verengt, schmal* (Taf. 3, Fig. 52, 53). . . . . 15. Genus PARAPHYOLA, nov. gen.

— *Analader als Falte den Hinterrand des Flügels erreichend oder plötzlich stumpf abgebrochen, nicht auslaufend. Stirne von mittlerer und grösserer Breite* . . . . . 17.

17. *Untergesicht mit einem geraden medianen Längskiel, an dessen Seiten rinnenartige Fühlergruben nach unten hin auslaufen.*

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(1) *Pseudeuxesta* hat auch einen etwas aufgeblasen Kopf, aber konkaven Klypeus und schmälere Backen als die hieher gehörigen Arten.

Mesopleuren nackt. Sternopleuren mit zwei Borsten (**Taf. 3, Fig. 58, 60; Taf. 4, Fig. 59**) . . . . . 26. Genus SEOPTERA, Kirby.

— *Untergesicht ohne geraden Längskiel und ohne Fühlergruben. Mesopleuren deutlich behaart und beborstet; nur eine Sternopleuralborste* . . . . . 18.

18. *Stirnstrieme völlig nackt. Ueber einer Querfurche in der Stirnmitte liegen vier parallele Längswülste. Erste Hinterrandzelle fast oder ganz geschlossen* (**Taf. 1, Fig. 8-10**) . . . . . 3. Genus CHRYSOMYZA, Fallén.

— *Stirnstrieme behaart oder beborstet. Obige Längswülste fehlen. Erste Hinterrandzelle an der Mündung nie so stark verengt* . . . . . 19.

19. *Subkosta deutlich beborstet. Die Analader endet stumpf, faltenlos, ohne den Flügelrand zu erreichen* (**Taf. 2, Fig. 29-31**) . 6. Genus PAREUXESTA, Coquillett.

— *Subkosta nackt oder nur mikroskopisch kurz behaart. Die Analader erreicht als Falte den Flügelhinterrand* . . . . . 20.

20. *Stirne ein und einhalbmal so breit wie ein Auge. Farbe des Körpers unmetallisch* . . . . . 5. Genus ZACOMPSIA, Coquillett.

— *Stirne höchstens so breit wie ein Auge. Farbe des Körpers immer metallisch* . . . . . 21.

21. *Mediastina und Subkosta münden eng nebeneinander. Der spärlich behaarte und beborstete Kopf, namentlich das Gesicht und die Backen merklich aufgeblasen* (**Taf. 2, Fig. 27, 28**) . . 7. Genus PSEUDEUXESTA, nov. gen.

— *Subkostalzelle von normaler Länge und Breite. Kopf nicht aufgeblasen* (**Taf. 1, Fig. 14-25; Taf. 2, Fig. 26, 41, 43-45; Taf. 4, Fig. 99, 100**) . . . . . 4. Genus EUXESTA, Loew.

22. *Flügel vor der Spitze am breitesten, gegen die Wurzel zu allmählich verengt. Die hintere Querader ist soweit gegen die Flügelspitze hinausgerückt, dass der letzte Abschnitt der Diskoïdalader weitaus kürzer als der vorletzte ist* (**Taf. 2, Fig. 46-48**) . 14. Genus POLYTELOPTERA, nov. gen.

— *Flügel gegen die Wurzel hin breiter werdend. Der letzte Abschnitt der Diskoïdalader immer länger als der vorletzte* . . . . . 23.

23. *Langgestreckte Arten, bei denen innerhalb der unteren Frontorbitalborsten die Stirnstrieme mit Ausnahme des Vorderrandes oder auch ganz unbeborstet ist* . . . . . 24.

— *Körper selten schlanker Stirnstrieme deutlich mit Kreuzbörstchen besetzt* . . . . . 4. Genus EUXESTA, Loew.

24. *Analzelle unten durch die Querader nicht ganz geschlossen. Die Analader endet stumpf, faltenlos, ohne den Flügelrand zu erreichen* (**Taf. 2, Fig. 37, 38**) . . . . . 9. Genus HYPŒCTA, Loew.

— *Analzelle am spitzem Zipfel geschlossen. Die Analader erreicht als Falte den Flügelrand* (**Taf. 2, Fig. 32-36, 39, 40, 42; Taf. 3, Fig. 87; Taf. 4, Fig. 88**) . . . . . 8. Genus CHÆTOPSIS, Loew.

1. GENUS TIMIA, WIEDEMANN

Timia. Wiedemann, Analecta Ent. p. 15, f. 6 (1824); Aussereur. zweifl. Ins. Vol. 2, p. 564 (1830); Röder, Berl. Ent. Zeitschr. Vol. 25, p. 209 (1881); Mik, Wien. Ent. Zeit. Vol. 8. p. 187-201

(1889); Becker, Kat. Paläarkt. Dipt. Vol. 4, p. 107 (1905); Wien. Ent. Zeit. Vol. 25, p. 108 (1906); Hendel, Zeitschr. Hym. u. Dipt. p. 1 (1907).

Synonyma : **Empyelocera,** Loew, Berl. Ent. Zeitschr. Vol. 10, p. 238 (1866). Röder & Mik, loc. cit.; Becker, Kat. Paläarkt. Dipt. Vol. 4, p. 106 (1905).

Typische Art : *T. erythrocephala*, Pallas.

Wiedemann schreibt 1824 : « *Timia.* Antennæ distantes, exigue, foveolæ insertæ, triarticulatæ; articulo 3. ovali, compresso, basi seta dorsali nuda. Palpi porrecti, compressi, sat lati, apice obtusi. Corpus nudum. »

Charaktere. — Der Kopf ist meist ganz aussergewöhnlich gross, voluminös, von blasigem Aussehen, breiter als der Thorax, im Profile nie viel höher als lang, vor vorne nie viel breiter als hoch. Da diesbezüglich in den Grössenverhältnissen viele spezifische Abweichungen vom Gattungstypus vorkommen, habe ich zur Veranschaulichung einige Kopfprofile auf **Tafel I** dargestellt, ohne damit alle extremen Formen erschöpft zu haben. Die Stirne ist sehr breit, gewöhnlich ungefähr so breit wie der halbe Kopf, doch auch oft um ein Beträchtliches breiter. Im Profile ist ihre Neigung eine mittlere, ihre Krümmung nicht sehr gross, doch verschieden; der Stirnwinkel mit dem lotrechten Untergesicht nie scharf, sondern abgerundet stumpf, seine Grösse von der Stirnneigung abhängig. Die Stirne springt stark über die Augen vor, so dass Wangen von verschiedener, oft sehr grosser Breite gesehen werden können. Von vorne betrachtet divergieren die die Stirne begrenzenden Augenränder immer mehr weniger gegen die Fühler zu. Die auch der Quere nach gewölbte, meist aufgeblasene Stirnfläche (Strieme) ist nie ganz glatt, skulpturlos, sondern mit feinen oder gröberen vertieften Pünktchen bis Grübchen oder mit Quer- und Längsfalten oder Runzeln in verschiedenem Grade und in welchselnder Ausdehnung bedeckt. Dabei kann die Oberfläche ganz nackt, haarlos (*T. Klugi* etc.), kurz und fein, kaum merklich behaart (*T. erythrocephala*, etc.) oder in verschiedener, allmählicher Abstufung in Bezug auf Länge und Stärke behaart sein. Das Maximum der Stirnbehaarung zeigen die Arten, die Loew unter dem Namen *Empyelocera* zusammenfasste. Einige Arten zeigen eine vertiefte Mittellängslinie von den Ozellen herab, andere eine seichte Querfurche in der Mitte, ähnlich den *Chrysomyza*- Arten. Eine Bestäubung kann vorkommen oder fehlen. Eine Reihe von Arten hat auf der sonst bestäubten Stirne zwei glänzende, braune Längstriemen in der Mitte. Die Scheitelsplatten sind nicht mehr erkennbar oder als ganz kurze Platten oben am Augeneck undeutlich abgegrenzt. Die Ozellen liegen eng zusammengedrängt oben an der Scheitelkante, ein gleichseitiges Dreieck bildend.

Kopfborsten : Die Beborstung wechselt wie die Behaarung sehr stark nach Länge und Stärke, ist aber nie kräftig zu nennen. Die meisten Köpfe sind ziemlich kahl und viele Borsten fehlen oder sind nur rudimentär. So zum Beispiel die Frontorbitalborsten, die Ozellar- und Postvertikalborsten. In der Regel sind die einwärts gerückten, konvergierenden inneren und die divergierenden äusseren Scheitelborsten vorhanden. Weniger oft kann ein sehr zartes, eng beisammenstehendes, aufgerichtetes und mit den Spitzen nach vorne gebogenes Postvertikalpaar und ein hinter der ersten Ozelle inseriertes, nach aussem gebogenes Ozellarpaar gesehen werden. Am seltensten sind ein bis zwei Börstchen auf den Scheitelplatten als Frontorbitalborsten erkennbar.

Die Scheitelkante ist meist abgerundet (oft ist das Cerebrale sogar blasig gewölbt), seltener wirklich kantig. Der Hinterkopf ist also häufig merklich hinter die Augen vorgequollen, wulstig, und oben immer mehr weniger gewölbt, am Halse und unten flach.

Der Klypeus hat eine ganz merkwürdige und eigenartige Bildung, die er durch eine breite, die Fühler weit trennende Längleiste erhält. Diese Leiste tritt im Profile konvex über die Fühler vor, hat einen breiten gewölbten Rücken und kantige Seitenränder, welche mit den Gesichtsleisten tiefe, rund herum scharf begrenzte Fühlergruben bilden, in die die Fühler zurückgezogen sind. Unter der vorge-

wölbten Längsleiste und unter den Antennengruben hat der Klypeus eine Querfurche. Darunter tritt das runzelige Epistom mehr weniger im Profile vor, so dass die ganze Profillinie des Untergesichts eine schwach S-förmig gebogene Linie darstellt.

Die Stirnspalte zieht fast gerade von einer Fühlerwurzel zur andern, dann jedereits am scharfen Aussenrande der Flügelgruben herum bis zum unteren Ende derselben. Dort enden auch die Facialien und stossen mit den unbewimperten und stärker nach unten divergierenden Peristomalien zusammen, die auch im Profile deutlich als Leisten wahrnehmbar sind.

Wangen breit bis sehr breit Backen von sehr verschiedener Breite, schmal bis zu recht beträchtlicher Breite, oft aufgeblasen und vielfach hinter den Augen vorstehend.

Fühler kurz, in die Gruben zurückgezogen, halb versteckt. Erstes Glied kaum wahrnemhmbar; zweites kurz, oben mit einer abstehenden Borste; drittes rundlich scheibenförmig, mit einer nackten basalen, an der Wurzel schwach spindelig verdickten Arista. An den Wurzeln sind die Fühler weit getrennt von einander und stehen in der Regel weit unter der Augenmitte.

Die ungezeichneten Augen sind länglich lotrecht oval, mit spezifischen Unterschieden in der Höhe und Breite. Neben den Fühlerwurzeln bilden die Augenränder gar keinen oder einen wenig merklichen abgerundeten und sehr stumpfen Augenwinkel.

Mundöffnung ziemlich gross. Rüssel dick, sackartig, mit starkem Kinne und kurzen, breiten Labellen. Taster meist verbreitert, oft sehr breit, unten stark behaart. Prælabrum relativ klein und wenig auffallend, nie sehr breit und hoch.

Der Thorax ist stark und plump und ist wenigstens immer in Bezug auf Volumen dem Kopfe proportioniert. Der Rücken und die Pleuren sind stark, fast « kugelig » gewölbt, letztere ziemlich gleichmässig, nur die Gegend unter dem Stigma ist zum Hineinlegen der Vorderschenkel vertieft. Quernahtäste vor der Mitte. Humeralcallus wenig vortretend, klein. Schildchen meist etwas kürzer als ein Drittel des Rückens, eiförmig bis fast halbkreisförmig, oben auf der Fläche pubeszent bis deutlich kurzhaarig, gewölbt oder mehr weniger abgeflacht, am Rande mit vier Borsten, von denen vielfach nur jene zwei an der Spitze und diese oft nur kurz, manchmal dornartig entwickelt sind.

Beborstung : Als Maximum der Beborstung können beobachtet werden, eine Humerale, zwei Notopleurale, drei Supraalare, ein Paar Dorsozentrale hinten und ein Præscutellarpaar. Sehr häufig ist diese Beborstung des Rückens aber in verschiedenem Grade reduziert und sehen die Fliegen wie nackt aus. Die Grundbehaarung des Rückens ist ebenfals von verschiedener Länge und Stärke, manchmal ganz kurz und fein, eine wenig merkliche Pubeszenz bildend, bald stärker und ziemlich in Längsreihen geordnet. Die Wurzeln der Härchen sind durch vertiefte Punkte angezeigt.

Von den Pleuren sind die Meso- un Sternopleuren, manchmal ziemlich dicht, behaart. Ein oder zwei stärkere Mesopleuralborsten neben der Naht und meist eine Reihe aufwärts gebogener Sternopleuralborsten oben und hinten. Die Prothorakalborste fehlt oder ist rudimentär.

Beine mittellang und kräftig. Vorderhüften vorne nackt. Die posterodorsalen Borstenreihen sind hie und da nur durch Haare ersetzt, die stärkeren Borsten der posteroventralen Reihe manchmal durch kurze, fast dornartige Borsten. Bei einigen Arten tragen nicht allein die Vorder-, sondern auch die anderen Schenkel unten in zwei Reihen, postero- und anteroventral, kurze Dörnchen. Die Mittelschenkel haben vorne einige abstehende Börstchen, hinten sind sie mit Haaren bewimpert Hinterschenkel anterodorsal vor der Spitze mit mehreren Borsten. Ausserdem können noch spezifische Bewimperungen vorkommen. Mittelschienen innen mit mehreren Endspornen. Klauen und Pulvillen verhältnismässig gross.

Hinterleib eiförmig, glatt oder punktiert, mit fünf sichtbaren Segmenten von ungefähr gleicher Länge. Beim ♀ ist manchmal mit dem Ovipositor das schmale, sonst verdeckte sechste Segment vorgestreckt. Rücken glatt, kaum behaart oder kurzhaarig, höchstens hinten an den Seiten stärker mit

Haaren besetzt (*T. Camillae*, Mik, ist dort zottig behaart). Hypopyg kugelig. Erstes Glied des Ovipositors gewöhnlich kurz und sehr breit, schaufelförmig. Die Seiten sind konvex, selten fast gerade und die Spitze ist ausserordentlich breit abgestutzt.

Die Flügel sind bei den meisten Arten ganz glashell, seltener am Vorderrande und der Spitze gezeichnet. Die Nervatur erinnert durch die Steifheit der Adern an die Gattung *Acrosticta*. Die Kosta und die übrigen Längsadern sind gerade, höchstens die zweite bis vierte etwas geschwungen, namentlich an der Mündung schwach nach aufwärts gebogen. Die nackte Subkosta mündet geradlinig unter sehr spitzem Winkeltjenseits der Flügelmitte, die Mediastina sanft, aufwärts gebogen, wenig vorher, so dass die Subkostalzelle nur klein und schmal ist. Die erste Hinterrandzelle ist an der Spitze deutlich verengt, nie aber in dem Grade wie bei *Chrysomyza*, Fallén, und mündet an oder etwas vor der Flügelspitze. Die Queradern sind gerade. Die kleine steht immer jenseits der Mitte der Diskoïdalzelle und ist wenig schief, die hintere stärker geneigt, so dass der obere Winkel der Diskoïdalzelle weniger als ein Rechter ist. Am spitzigsten erscheint mir der Winkel bei *T. erythrocephala*, Wiedemann. Die grosse Analzelle ist vorne durch eine stumpf- oder höchstens fast rechtwinkelig gebrochene Querader abgeschlossen und unten in einen kräftigen spitzen Zipfel ausgezogen, der höchstens so lang wie der restliche Teil der den Flügelrand nur als Falte erreichenden Analader, meist aber kürzer ist. Axillarfalte deutlich. Schulterlappen und Alula, sowie Schüppchen normal.

Anmerkung. — Siehe die Auseinandersetzungen bei der Gattung *Ulidia*.

Geographische Verbreitung der Arten. — Neunundzwanzig Arten aus der paläarktischen Region.

1. *T. abtersa*, Loew, Nachr. Kais. Ges. Freunde Nat. in Moskau, p. ? (1870); Beschr. Eur. Dipt. Vol. 3, p. 289 (194) (1873) (*Empyelocera*). Süd-Russland, Turkestan.
   abstersa, Röder, Berl. Ent. Zeitschr. Vol. 25, p. 210 (1881) (*Empyelocera*); Mik, Wien. Ent. Zeit. Vol. 8, p. 189 (1) (1889) (*Empyelocera*).
2. *T. amoena*, Loew, Zeitschr. Gesamt Naturw. Vol. 43, p. 419 (18) (1874) (*Empyelocera*). Persien.
   amoena, Röder, Berl. Ent. Zeitschr. Vol. 25, p. 211 (1881) (*Empyelocera*); Mik, Wien. Ent. Zeit. Vol. 8, p. 194 (5) (1889) (*Empyelocera*).
3. *T. anomala*, Becker, Ann. Mus. Zool. Acad. Sc. St.-Pétersb. Vol. 12, p. 270 (24) (1907) (*Empyelocera*). Zentral-Asien.

— *T. apicalis*, Meigen = *Ulidia*-Art.

4. *T. Camillae*, Mik, Wien. Ent. Zeit. Vol. 8, p. 195 (7) (1889) (*Empyelocera*). Turkmenien.
5. *T. canaliculata*, Becker, Wien. Ent. Zeit. Vol. 25, p. 117 (12) (1906); Ann. Mus. Zool. Acad. Sc. St.-Pétersb. Vol. 12, p. 268 (22) (1907). Zentral-Asien.
   canaliculata, Hendel, Zeitschr. Hym. Dipt. p. 4 (1908).
6. *T. carbonaria*, Hendel, ibidem, p. 10 (7) (1908). Kaukasus.
7. *T. dimidiata*, Becker, Wien. Ent. Zeit. Vol. 25, p. 115 (1906). Zentral-Asien.
8. *T. erythrocephala*, Pallas, in Wiedemann, Anal. Ent. p. 15 (1824); Aussereur. zweifl. Ins. Vol. 2, p. 564 (1830). Süd-Russland.
   erythrocephala, Schiner, Fauna Austr. Vol. 2, p. 86 (1864) (*Timia*); Röder, Berl. Ent. Zeitschr. Vol. 25, p. 210 (1881); Mik, Wien. Ent. Zeit. Vol. 8, p. 199 (2) (1889); Becker, ibidem, Vol. 25, p. 116 (8) (1906); Hendel, Zeitschr. Hym. Dipt. p. 4 (1908).
9. *T. hirtipes*, Hendel, Zeitschr. Hym. Dipt. p. 4 (1) (1908). — **Taf. 1, Fig. 7.** Transkaspien.
10. *T. Jakowlewi*, Hendel, ibidem, p. 6 (2) (1908). Transkaspien.
11. *T. Klugi*, Hendel, ibidem, p. 10 (6) (1908). — **Taf. 1, Fig. 1-3.** Zentral-Asien.
12. *T. Komarowii*, Mik, Wien. Ent. Zeit. Vol. 8, p. 200 (3) (1889). Turkmenien.
    Komarowii, Becker, ibidem, Vol. 25, p. 117 (11) (1906); Hendel, Zeitschr. Hym. Dipt. p. 4 (1908).

13. *T. melanorrhina*, Loew, Berl. Ent. Zeitschr. Vol. 10, p. 239 (1) (1866) (*Empyelocera*). Russland.
melanorrhina, Röder, Berl. Ent. Zeitschr. Vol. 25, p. 210 (1881) (*Empyelocera*); Mik, Wien. Ent. Zeit. Vol. 8, p. 190 (2) (1889) (*Empyelocera*).

14. *T. mellina*, Becker, Wien. Ent Zeit. Vol. 25, p. 116 (6) (1906). Zentral-Asien.
mellina, Hendel, Zeitschr. Hym. Dipt. p. 3 (1908).

15. *T. monticola*, Becker, Wien. Ent. Zeit. Vol. 25, p. 114 (4) (1906). Zentral-Asien.
monticola, Hendel, Zeitschr. Hym. Dipt. p. 2 (1908).

16. *T. nasuta*, Mik, Wien. Ent. Zeit. Vol. 8, p. 191 (3) (1889) (*Empyelocera*). Turkmenien.

17. *T. nigriceps*, Hendel, Zeitschr. Hym. Dipt. p. 7 (3) (1908). Transkaspien.

18. *T. nigrimana*, Loew, Berl. Ent. Zeitschr. Vol. 10, p. 240 (2) (1866) (*Empyelocera*). Russland.
nigrimana, Röder, Berl. Ent. Zeitschr. Vol. 25, p. 210 (1881) (*Empyelocera*); Mik, Wien. Ent. Zeit. Vol. 8, p. 192 (4) (1889).

19. *T. nigripes*, Mik, Wien. Ent. Zeit. Vol. 8, p. 201 (4) (1889). Turkmenien.
nigripes, Becker, Wien. Ent. Zeit. Vol. 25, p. 116 (9) (1906); Hendel, Zeitschr. Hym. Dipt. p. 4 (1908).

20. *T. parva*, Hendel, Zeitschr. Hym. Dipt. p. 8 (4) (1908). Transkaspien.

21. *T. planiceps*, Hendel, Wien. Ent. Zeit. Vol. 29, p. 104 (1910). Turkmenien.

22. *T. protuberans*, Becker, Wien. Ent. Zeit. Vol. 25, p. 113 (2) (1906); Ann. Mus. Zool. Acad. Sc. St-Pétersb. Vol. 12, p. 266 (20) (1907). — **Taf. I, Fig. 8.** Zentral-Asien.
protuberans, Hendel, Zeitschr. Hym. Dipt. p. 2 (1908).

23. *T. pulchra*, Röder, Wien. Ent. Zeit. Vol. 8, p. 186 (1889). Persien.
pulchra, Mik, Wien. Ent. Zeit. Vol. 8, p. 198 (1) (1889); Becker, ibidem. Vol. 25, p. 117 (10) (1906); Hendel, Zeitschr. Hym. Dipt. p. 4 (1908).

24. *T. punctulata*, Becker, Wien. Ent. Zeit. Vol. 25, p. 112 (1) (1906); Ann. Mus. Zool. Acad. Sc. St.-Pétersb. Vol. 8, p. 265 (19) (1907). Zentral-Asien.
punctulata, Hendel, Zeitschr. Hym. Dipt. p. 1 (1908).

25. *T. Reitteri*, Hendel, Zeitschr. Hym. Dipt. p. 9 (5) (1908). — **Taf. I, Fig. 5.** Transkaspien.

26. *T. testacea*, Portschinsky, Hor. Soc. Ent. Ross. Vol. 16, p. 211 (1892). Zentral-Asien.
testacea, Becker, Wien. Ent. Zeit. Vol. 25, p. 116 (1906); Hendel, Zeitschr. Hym. Dipt. p. 3 (1908).

27. *T. turgida*, Becker, Wien. Ent. Zeit. Vol. 25, p. 114 (3) (1906); Ann. Mus. Zool. Acad. Sc. St.-Pétersb. Vol. 12, p. 267 (21) (1907). Zentral-Asien.
turgida, Hendel, Zeitschr. Hym. Dip. p. 2 (1908).

28. *T. xanthaspis*, Loew, Berl. Ent. Zeitschr. Vol. 12, p. 175 (1868) (*Empyelocera*). Süd-Russland.
xanthaspis, Röder, Berl. Ent. Zeitschr. Vol. 25, p. 210 (1881); Mik, Wien. Ent. Zeit. Vol. 8, p. 192 (4) (1889).

29. *T. xanthostoma*, Becker, Ann. Mus. Zool. Acad. Sc. St.-Pétersb. Vol. 12, p. 269 (23) (1907) (*Empyelocera*). Zentral-Asien.

2. Genus ULIDIA, Meigen

Ulidia. Meigen, Syst. Beschr. Eur. zweifl. Ins. Vol. 5, p. 385, t. 53, f. 7-12 (1826), sensu Loew, Die Europ. Ortalidæ, Zeitschr. Gesamt. Naturw. Vol. 32, p. 9 (2) (1868); Mon. N. Amer. Dipt. Vol. 3, p. 6 (1873); Roeder, Berl. Ent. Zeitschr. Vol. 25, p. 209 (1881); Becker, Kat. Paläarkt. Dipt. Vol. 4. p. 105 (1905).

Ulidia. Schiner, Fauna Austr. Vol. 2, p. 86 (405) (1864) = (*Ulidia*, sens. Loew, exclus. *U. apicalis*, Meigen.)

Synonym : **Timia.** Meigen (p. p.), Syst. Beschr. Eur. zweifl. Ins. Vol. 5, p. 388 (1826); Schiner, Fauna Austr. Vol. 2, p. 86 (404) (1864).
Timia. Rondani, Stirps, 21. *Tanipezinae,* Bull. Soc. Ent. Ital. Vol. 6, p. 5 (1874).

Typische Art : *U. erythrophthalma*, Meigen.

Charaktere. — Kopf, namentlich im Verhältnisse zum Thorax, aussergewöhnlich gross und breit, beträchtlich breiter als der Rücken. Der grösste lotrechte und wagrechte Kopfdurchmesser ist im Profile ungefähr gleich lang, von vorne besehen ist der wagrechte ungefähr fünf Viertel des lotrechten lang. Die Stirne ist sehr breit, im Durchschnitte meist so breit wie der halbe Kopf. Im Profile ist sie mittelstark geneigt und mit Ausnahme des oberen Teils am Scheitel, der sich ohne scharfe Scheitelkante schon von der Ozellengegend an zum Hinterkopf hinabkrümmt, wenig gewölbt, fast gerade. Der Stirnwinkel mit dem lotrechten Untergesichte ein abgerundet stumpfer. Die Stirne springt immer ein solches Stück über die Augen vor, dass im Profile die Wangen in ziemlicher Breite gesehen werden können. Von vorne betrachtet sind die Stirnränder fast parallel und gerade. Die Stirnfläche (Strieme) ist der Quere nach deutlich gewölbt und mit Hohlpunkten mehr weniger dicht besetzt. Die Ozellen liegen ganz oben am Scheitel und bilden eng zusammengedrängt ein gleichseitiges Dreieck. Die Ozellenplatte ist aber noch eher von der Strieme unterscheidbar als die borstentragenden Scheitelplatten, deren Lage nur die Glätte des dortigen Chitins verät.

Kopfborsten : Zum Unterschiede von der Gattung *Timia* sind alle Borsten des Kopfes deutlich und gut entwickelt und ist die Behaarung der Stirnstrieme stets dicht und ziemlich lang zu nennen. Obere Frontorbitalborsten zwei, ganz oben, nach hinten und aussen gebogen, die vordere derselben kürzer und schwächer. Ozellarborsten hinter der ersten Ozelle, ziemlich lang, nach aussen divergierend und mit den Spitzen nach hinten gebogen. Die konvergierenden inneren Vertikalborsten sind weit einwärts gerückt, die divergierenden äusseren stehen in der Verlängerung der Stirnaugenränder und bilden jederseits die oberste der häufig auffallend langen Postokularcilien. Die Postvertikalborsten stehen schon am Hinterkopfe, sind fast parallel und mit den Spitzen nach vorne gekrümmt. Die Behaarung der Stirnstrieme ist ziemlich dicht und lang, aber fein.

Scheitelkante abgerundet, wie die hinter den Augen liegenden Kopfteile konvex, gewölbt, nur das Zerebrale ist seicht konkav. Unterer Hinterkopf wieder gewölbt.

Der Klypeus hat mit der die Fühler und die scharfrandigen Gruben breit trennenden, im Profile über die Antennen vorgewölbten Mittellängsleiste und der das wieder vortretende Epistom von diesem Längskeil sondernden Querfurche genau dieselbe Bildung, wie sie bei *Timia* beschrieben wurde, nur scheint mir das Epistom breiter, da es so breit wie die Stirne ist. Bei *Timia* wird diese Breite nicht erreicht und ist der Mundrand auch der Quere nach nie so deutlich gewölbt.

Die Stirnspalte zieht in einem sanften Bogen über die Fühlergruben hinweg — die Lunula ist ein Teil der oben genannten Längsleite, — ihre Aeste laufen knapp am Aussenrande der Fühlergruben nach unten, etwas divergierend, und enden in der Höhe der Klypeusquerfurche in den Backengruben. Die Facialien bilden den scharfen Aussenrand der Gruben und stossen am unteren Ende derselben mit den weniger steil aufsteigenden, immer deutlich bewimperten Peristomalien in einer merklichen Ecke zusammen.

Wangen breit, Backen von mittlerer Breite, hinten nicht herabgezogen, aber etwas hinter die Augen vorgewölbt. Die nackten Backengruben sind zwischen Auge und Backenleisten deutlich vom behaarten unteren Hinterkopfsteil unterscheidbar.

Fühler, Mundöffnung, Rüssel und seine Teile wie bei *Timia*.

Die ungezeichneten Augen sind länglich lotrecht oval. Der Augenwinkel neben den Fühlerwurzeln ist ein abgerundeter stumpfer.

Der Thorax ist im Verhältnisse zur Kopfgrösse und zum Umriss des Hinterleibes auffallend klein. Der Rücken ist so lang wie breit, oben ziemlich gewölbt, hat beulig vortretende Schultern und die Quernahtäste in der Seitenmitte. Die Pleuren sind ziemlich gleichmässig, die Mesopleuren nur wenig stärker gekrümmt. Schildchen ein Drittel des Rückens lang oder etwas kürzer, eiförmig, oben gewölbt und deutlich behaart, am Rande mit vier schiefstehenden Borsten besetzt.

Beborstung des Thorax wohlentwickelt. Eine Humerale, zwei Notopleurale, vier Supraalare, ein paar Dorsozentrale hinten und ein Præscutellarpaar. Die Grundbehaarung des Rückens ist in Längsreihen geordnet und ziemlich lang.

Meso- und Sternopleuren behaart. Neben der Naht mehrere Mesopleuralborsten. Eine Sternopleuralborste oben und hinten. Prothorakalborste nur schwach.

Beine mittellang und kräftig. Vorderhüften kurz, nur unten beborstet. Vorderschenkel mit dichten Borstenreihen der Länge nach : zwei schwächere posterodorsal und eine aus stärkeren Borsten posteroventral. Mittelschenkel vorne abstehend borstlich behaart, hinten lang gewimpert. Hinterschenkel anterodorsal mit mehreren Borsten in einer Reihe vor der Spitze. Mittelschenkel innen am Ende mit einem langen Sporn unter einigen kürzeren.

Hinterleib breit elliptisch, breiter als der Rücken, mit fünf, ungefähr gleichlangen Ringen. Beim ♂ liegt hinter dem etwas längeren fünften Tergit das kleine, rundliche Hypopyg, beim ♀ ist das sechste Tergit oft noch als schmaler Saum sichtbar. Das erste Glied des Ovipositors ist viel breiter als lang, hinten breit abgestutzt, trapezförmig, an den Seiten konvex oder fast gerade, an der Wurzel ungefähr so breit wie das dortige Hinterleibsende, nicht eingeschnürt. Behaarung oft ziemlich rauh, namentlich an den Seiten der Spitze.

Die Flügeladerung ist jener der Gattung *Tinia* so ähnlich, dass wenig mehr zu sagen ist. Die Längsadern zeigen an der Mündung keine Neigung zum Aufwärtsbiegen. Der Zipfel an der Analzelle ist immer bei weitem kürzer als der restliche Teil der Analader, ja nur ein Teil desselben.

Anmerkungen. — Weder Loew noch Schiner kannten eine echte *Timia*-Art, denn sonst würde ersterer nicht seine Gattung *Empyelocera* aufgestellt und letzterer nicht die *Ulidia apicalis*, Meigen, die doch eine echte *Ulidia*-Art ist, als Gattungsvertreter des Wiedemann'schen Genus mühsam hinzustellen versucht haben. Man vergleiche nur seine Ausführungen in der *Fauna Austriaca*, Vol. 2, p. 87, und seine Polemik gegen Loew.

Röder, der erste, der Timien mit den verwandten Gattungen vergleichen konnte, hält diese Formen in der *Berl. Ent. Zeitschr.* Vol. 25, p. 209 (1881) folgender Massen auseinander :

Kopf auffallend gross. Stirn nackt.	Timia, Wiedemann.
Kopf mässig gross. Mitte der Stirne punktiert, Stirn kurz behaart	Ulidia, Meigen.
Kopf mässig gross. Mitte der Stirne unpunktiert, nur an den Seiten spärlich behaart .	Empyelocera, Loew.

Schon Mik hat auf die geringe Stichhaltigkeit dieser Unterscheidungsmerkmale hingewiesen, dennoch aber die Gattung *Empyelocera* auf Loew's Autorität hin beibehalten. Nun hat Loew aber wie schon gesagt seine Gattung nur mit *Chrysomyza*, Fallén, verglichen, da er *Timia*, Wiedemann, in keiner genuinen Form kannte, und eine Gattungsbeschreibung gegeben, die vollständig auf die Timien passt. Die spätere Röder'sche und Mik'sche Komentierung ist ganz und gar unzureichend, das Genus *Empyelocera* zu retten. Die zahlreichen neuen Formen, die Becker und mir seitdem zur Kenntnis kamen, haben auch die subtilsten generischen Merkmale zur Trennung untauglich gemacht.

Aber auch die Meigen'sche Gattung *Ulidia* ist nur durch geringfügige Unterschiede von *Timia* zu sondern. Meigen's Auffassung seiner eigenen Gattung wurde von Loew korrigiert und ist in diesem Sinne heute angenommen. Loew schreibt in der *Zeitschr. Gesamt. Naturw.*, Vol. 32, p. 9 (1868): « Es ist unzweifelhaft, dass *Timia apicalis*, Meigen, in die Gattung *Ulidia* zu stellen ist. *Timia erythrocephala*,

Wiedemann, auf welche die Gattung *Timia* begründet worden ist, kenne ich nicht. Wiedemann's Angaben führen nicht auf die Vermuthung, dass sie ebenfalls eine *Ulidia* sein könne; eher möchte man eine *Verwandtschaft mit der* Gattung *Empyelocera* vermuten; ohne Ansicht der Fliege lässt sich nicht darüber entscheiden. » Soviel Loew, aber auch nicht mehr ! Nur in den *Monographs*, Vol. 3, p. 6 (1873) fügt er noch hinzu : « *Timia* differs from *Ulidia* only in its extreme glabrousness, its swollen head, much more projecting beyond the eyes in profil, and perhaps also the somewhat less developed clypeus; in all the other important characters both genera agree. »

Ich habe nach genauer Vergleichung beider Formen Folgendes gefunden : Die *Ulidia*-Arten unterscheiden sich durch die wohlentwickelte Kopf- und Thoraxbeborstung, sowie dadurch, dass bei ihnen der Thorax im Verhältniss zur Kopfgrösse und dem Hinterleibsumfang auffallend klein und schwach erscheint.

Die Timien haben nie diese vollkommene Beborstung und starke Behaarung wie sie den *Ulidia*-Arten eigen ist, sondern machen immer einen mehr nackten Eindruck. Ferner ist ihr Thorax nicht weniger voluminös als der aufgeblasene Kopf und zum Hinterleibe ganz wohl proportioniert. Keine *Timia*-Spezies hat vier Supraalarborsten wie die *Ulidia*-Arten !

Habituell zeichnen sich die *Ulidia*-Arten durch ihre glänzend schwarze Färbung, also durch das Fehlen jeglicher Bestäubung aus, was nur bei einigen *Timia*-Arten der Fall ist.

Die älteren Autoren, wie Meigen, Wiedemann, Macquart, hatten von der Gattung *Ulidia* eine viel weitere Auffassung. Der Umfang derselben entspricht ungefähr unserer heutigen Subfamilie *Ulidiinae*.

Geographische Verbreitung der Arten. — Zehn Arten aus der alten Welt, eine fragliche aus Nord-Amerika.

1. *U. albidipennis*, Loew, Dipt. Beitr. Vol. 1, p. 32 (5) (1845). — Süd-Europa.

2. *U. apicalis*, Meigen, Syst. Beschr. Vol. 5, p. 388 (1), t. 53, f. 13-16 (1826) (*Timia*). — **Taf. I, Fig. 4, 11-13.** — Süd-Europa.
   apicalis, Macquart, Suites à Buffon, Vol. 2, p. 505 (6) (1835) (*Ulidia*); Schiner, Fauna Austr. Vol. 2, p. 86 (1864) (*Timia*); Loew, Zeitschr. ges. Naturw. Vol. 32, p. 9 (1868); Rondani, Tanipezinæ, Bull. Soc. Ent. Ital. Vol. 6, p. 5 (1874) (*Timia*); Strobl, Mem. Soc. Esp. Hist. Nat. Madr. Vol. 3, p. 355 (1906).

3. *U. atrata*, Loew, Zeitschr. ges. Naturw. Vol. 32, p. 11 (13) (1868); Beschr. Eur. Dipt. Vol. 3, p. 287 (192) (1873). — Griechenland.

4. *U. atrovirens*, Loew, Dipt. Beitr. Vol. 1, p. 32 (6) (1845). — Klein-Asien.

— *U. bipunctata*, Macquart = *Euxesta*-Art.

— *U. clausa*, Macquart = *Chrysomyza aenea*, Fabricius.

5. *U. erythrophthalma*, Meigen, Syst. Beschr. Vol. 5, p. 387 (2) (1826). — Süd- und Mittel-Europa.
   erythrophthalma, Macquart, Suites à Buffon, Vol. 2, p. 505 (2) (1835); Schiner, Fauna Austr. Vol. 2, p. 88 (1864); Rondani, Tanipezinæ, Bull. Soc. Ent. Ital. Vol. 6, p. 5 (1874) (*Timia*); Strobl, Mem. Soc. Esp. Hist. Nat. Madr. Vol. 3, p. 355 (1906).
   syn. nitens, Loew, Dipt. Beitr. Vol. 1, p. 32, Anmerk. 4 (1845).
   nitida, Meigen, Syst. Beschr. Vol. 5, p. 387 (3) (1826); Macquart, Suites à Buffon, Vol. 2, p. 505 (3) (1835); Becker, Zeitschr. Hym. Dipt. Vol. 2, p. 247 (3) (1902).

— *U. ? fulvifrons*, Bigot, in Ramon de la Sagra's Hist. Phys. Polit. Nat. Cuba, p. 826 (1857). — Cuba.
   fulvifrons, Loew, Mon. N. Amer. Dipt. Vol. 65, 202 (1873).

6. *U. megacephala*, Loew, Dipt. Beitr. Vol. 1, p. 33 (7) (1845). — Klein-Asien, Rhodus.
   syn. macrocephala, Schiner 1), Fauna Austr Vol. 2, p. 87, Note (1864).

7. *U. melampodia*, Loew 2), Beschr. Eur. Dipt. Vol. 3, p. 287 (191) (1873). — Persien, Süd-Russland.

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1) Nach Schiner ist die Loew'sche Art « höchst wahrscheinlich identisch » mit *U. apicalis*, Meigen.

2) Die erste Beschreibung dieser Art findet sich in den *Schriften der Kais. Gesellsch. d. Freunde d. Natur*, in Moskau, 1870, unter No. 31. Ich kenne sie nicht.

— *U. melanopsis*, Walker (1849) = *Chrysomyza aenea*, Fabricius.
— *U. metallica*, Bigot, in Ramon de la Sagra's Hist. Phys. Polit. Nat. Cuba, p. 825, t. 20, f. 11, 11*a-b* (1857). Cuba.
metallica, Loew, Mon. N. Amer. Dipt. Vol. 3, p. 65, als *Chrysomyza*-Art und p. 202 als Agromyzide. Der Zeichnung nach liegt eine Agromyzine oder wegen der fehlenden Wurzelzellen vielleicht eine Milichine, nie aber eine Ulidine vor!
8. *U. nigripennis*, Loew, Dipt. Beitr. Vol. 1, p. 29 (2) (1845). Mittel-Europa.
nigripennis, Schiner, Fauna Austr. Vol. 2, p. 88 (1864); Rondani, Tanipezinæ, Bull. Soc. Ent. Ital. Vol. 6, p. 5 (1874) (*Timia*).
— *U. nitens*, Loew = *U. erythrophthalma*, Meigen.
— *U. nitida*, Meigen = *U. erythrophthalma*, Meigen.
9. *U. parallela*, Loew, Dipt. Beitr. Vol. 1, p. 30 (3) (1845) Süd-Europa.
parallela, Schiner, Fauna Austr. Vol. 2, p. 88 (1864).
10. *U.* ? *rubida*, Loew, Zeitschr. ges. Naturw. Vol. 48, p. 337 (1876). Californien.
11. *U. semiopaca*, Loew, ibidem, Vol. 32, p. 10 (12) (1868); Beschr. Eur. Dipt. Vol. 3, p. 288 (193) (1873). Frankreich.
— *U. smaragdina*, Loew = *Chrysomyza* ead.

3. Genus CHRYSOMYZA, Fallén

Chrysomyza. Fallén, Dipt. Suec. Scenopinii, p. 3 (1817); Becker, Kat. Paläarkt. Dipt. Vol. 4, p. 107 (1905); Aldrich, Cat. N. Amer. Dipt. p. 595 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 278 (1908); Hendel, Zool. Anzeig. Vol. 34, p. 612 (1909).

Synonyma : **Physiphora.** Fallén, Nov. Dipt. Dispon. Methodus, p. 11 (33) (1810).
Chloria. Schiner, Wien. Ent. Monatschr. Vol. 6, p. 151 (1862); Röder, Berl. Ent. Zeitschr. Vol. 25, p. 209 (1881); V. d. Wulp, Cat. Dipt. South Asia, p. 182 (1896).
Ulidia. Meigen (p. p.), Macquart, Zetterstedt, Walker u. s. w.

Typische Art : *C. demandata*, Fabricius.

Fallén stellt 1810 folgende Diagnose auf : « 33. *Physiphora.* Clypeus excavatus, muticus, infra oculos descendens Proboscis capitulo maximo. Abdomen planum. — Spec. Sv. 1. Os stipite proboscidis brevissima : capitulo vesiculoso, maximo, bifido. Palpi sensim crassiores, ante capitulum inserti. »

Charaktere. — Kopf wenig breiter als der Thorax. Im Allgemeinen verhält sich der lotrechte Kopfdurchmesser zum wagrechten im Profile wie 4 : 3, von vorne wie 5 : 7. Die parallelrandige Stirne ist etwas breiter als ein Drittel der Kopfbreite, von mittlerer Neigung im Profile und bildet mit dem oben etwas zurückweichenden Klypeus einen deutlichen, wenn auch abgerundeten Stirnwinkel; an und gleich über den Fühlerwurzeln tritt die Stirne ein wenig wulstig über die Augen vor. Die ungefähr quadratische Stirnfläche hat in der Mitte eine mehr weniger deutliche Querfurche, die von einem Auge zum anderen geht. Von oben her münden mit ihren Spitzen in diese Querfurche vier nebeneinander liegende Querwülste, welche verschieden deutlich differenziert sein können. Der Vorderrand der Stirne ist meist ein wenig konvex emporgewölbt und erzeugt in Profile den oben erwähnten Wulst über den Fühlern. Die Scheitelplatten sind nicht deutlich abgesondert, nur kurz und liegen im oberen Drittel der Stirne ganz am Augenrande. Die Ozellen liegen ganz in der Nähe der abgerundeten Scheitelkante, eng zusammengedrängt. Die ganze Stirnfläche ist glatt, unbehaart und nur bei einer Art (*C. tarsata*, Macquart) vorne fein punktiert.

Kopfborsten : Jederseits oben zwei sehr kurze und feine Frontorbitalbörstchen, die leicht übersehen werden können. Ozellarpaar ebenfalls sehr zart, nach vorne und aussen gebogen, hinter der

ersten Ozelle stehend. Inneres Vertikalpaar nach einwärts gerückt, parallel oder schwach kon- oder sogar divergierend. Das äussere Paar etwas ausserhalb der Stirnaugenränder. Postvertikalpaar aufgerichtet, mit den Spitzen etwas nach vorne gebogen, schon hinter der Scheitelkante inseriert.

Der Hinterkopf ist oben kaum etwas für den Thorax ausgehöhlt, fast flach, unten aber gewölbt. Die hinteren Augenränder treten etwas vor.

Der Klypeus zeigt im Profile eine im abgerundeten Winkel gebogene, konkave Linie, doch tritt der Mundrand nie stark vor. (Nur bei *C. chalybea* etwas über die Fühlerwurzeln.) Die seichte Querfurche des Klypeus liegt ungefähr in der Mitte oder etwas höher. Von vorne betrachtet wird der Klypeus nach unten hin nur wenig breiter und erreicht die Stirnbreite oder etwas mehr. Das Epistom ist der Quere nach stark gewölbt. Unter den Fühlern sind neben den Facialien seichte Längsgruben für die Fühler erkennbar. Diese Gruben sind aber weder allseitig abgegrenzt, noch sind die Fühler in sie zurückgezogen.

Die Stirnspalte zieht in flachem Bogen, manchmal fast gerade, knapp über die Fühler weg. Ueber und zwischen den Fühlern tritt die Lunula leistenartig vor. Die Spaltenäste divergieren geradlinig schwach nach unten und ebenso die gleich daneben liegenden Gesichtsleisten. Beide reichen von vorne betrachtet fast bis zum Mundrande nach unten. Das Vibrisseneck, das mit den Peristomalien gebildet wird, ist nur im Profile gut sichtbar.

Wangen von geringer Breite. Backen circa ein Drittel des lotrechten Augendurchmessers breit, zum grössten Teil vom unteren Hinterkopf gebildet. Die Backengruben sind als dreieckige Eindrücke unter dem Auge, in der Fortsetzung des Stirnspaltenendes, sichtbar. Die Backen sind hinten nicht herabgesenkt, hinter den Augen aber hier und da etwas wulstig vortretend.

Fühler geneigt, mittellang, höchstens fast so lang wie das Untergesicht, an den Wurzeln etwas weiter als ein Drittel der Stirnbreite entfernt. Das Wurzelglied kaum sichtbar, das zweite kurz, oben mit einer abstehenden Borste, das dritte kurz oval, höchstens gut zweimal so lang wie breit, vorne stumpf abgerundet, selten am Oberrande gerade. Arista basal, nackt, an der Wurzel spindelig verdickt. Im Profile sitzen die Fühler der Augenmitte gegenüber oder nur wenig darunter.

Augen im Leben immer querbandiert, mit spezifischen Verschiedenheiten, lotrecht oval. Das Augeneck neben den Fühlern ist scharf und geradschenkelig, circa 120° gross.

Mundöffnung gross, vorne und hinten hinaufgezogen. Rüssel kurz und dick, Kinn hornig. Taster kurz, stark verbreitert, unten beborstet. Prælabrum mittelgross, aber stark vortretend.

Thorax kurz und kräftig. Rücken quadratisch, oben wenig gewölbt, oft ziemlich flach. Quernahtäste vor den Seitenmitten. Pleuren diagonal stärker gewölbt. Die Brust ist vorne unten für die Bewegung der Vorderhüften stark ausgehöhlt. Sternopleuren verkürzt erscheinend. Schildchen ein Viertel bis fast ein Drittel des Rückens lang, eiförmig, oben nackt, gewölbt bis eben abgeflacht, durch eine Querrinne vom Rücken scharf geschieden, aber über die Fläche desselben nicht merklich emporgehoben.

Beborstung : Grundbehaarung des Rückens in der Zentralregion auf zwei Längsreihen kurzer Härchen reduziert, die in der Linie der Dorsozentralborsten verlaufen und hinten mit einer rudimentären Dorsozentralborste enden. Einige solche Härchen dann nur noch auf dem Supraalarcallus, sonst ist der Rücken nackt, glatt oder matt ziseliert. Humerale eine, Notopleurale eine, Supraalare vier, also eine Borste mehr als normal. Præscutellarpaar fehlt.

Pleuren : Meso- und Sternopleuren behaart. Längs der Naht eine starke Mesopleuralborste. Eine Sternopleurale oben, hinten. Prothorakalborste fehlt.

Beine mittellang, kräftig. Die Vorderbeine sind verlängert und zeigen in den Hüften eine ausserordentlich, an die Tabaniden erinnernde Beweglichkeit. Die langen, vorne nackten Vorderhüften liegen der Brust nie dicht an und können im Gelenke von derselben weit entfernt werden. Hinterhüften mit

zwei Borsten. Vorderschenkel posterodorsal nur mit spärlichen, oft nur haarähnlichen Borstenreihen besetzt, posteroventral aber gegen die Spitze zu mit kurzen deutlichen, oft dornartigen Borsten besetzt. Mittelschenkel vorne mit abstehenden Börstchen bedeckt, hinten lang gewimpert. Hinterschenkel anterodorsal mit mehreren langen Borsten vor der Spitze. Schienen etwas gekrümmt, manchmal merklich verbreitert. Mittelschienen innen mit einem Endsporn. Füsse lang, besonders die noch verbreiterten vordersten. Klauen und Pulvillen normal.

Hinterleib eiförmig, glatt, beim ♂ mit fünf sichtbaren Ringen, von welchen der letzte oft merklich verlängert ist, beim ♀ mit sechs sichtbaren Segmenten. Das sechste Tergit tritt nur ganz schmal hervor und kann leicht übersehen werden. Das kugelige Hypopyg ist nur klein. Das erste Glied der Legeröhre ist kaum so lang wie breit, trapezförmig, an den Seiten schwach konvex oder fast gerade, dem Hinterleibe ziemlich angeschlossen.

Flügel bei allen Arten ganz glashell. Kosta gerade. Subkosta nackt, gerade, jenseits der Flügelmitte mündend. Mediastina normal. Subkostalzelle schmal, schlank. Radialis und Cubitalis fast gerade oder nur wenig gebogen. Die erste Hinterrandzelle ist an der Spitze fast bis zur Berührung der zwei Längsadern verengt oder sogar geschlossen und manchmal gestielt. Die Krümmungen der begrenzenden Längsaderabschnitte sind spezifisch verschieden. Die zwei Queradern sind gerade und stehen nur wenig schief, die kleine jenseits der Mitte der Diskoïdalzelle. Die Analzelle ist in einen geraden spitzen Zipfel ausgezogen, der länger als der restliche Teil der Analader ist. Die vorne schliessende Querader ist in einem abgerundeten stumpfen Winkel gebogen, der wenig von einer Geraden abweicht. Die Analader erreicht nicht einmal als Falte vollständig den Rand. Axillarfalte sichtbar. Alula und Schulterlappen, sowie die Schüppchen normal.

Anmerkung. — Die metallisch grünen, oft goldglänzenden Fliegen sind an der glatten, nackten und quergefurchten Stirne, den frei inserierten, nicht in Fühlergruben versenkten Antennen und der fast oder ganz geschlossenen und manchmal gestielten ersten Hinterrandzelle leicht zu erkennen. Im Leben fällt ihr Spiel mit den aussergewöhnlich beweglichen Vorderbeinen, ein beständiges Umhertasten, auf. In der Kopfbildung ähneln der Gattung einige *Euxesta*-Arten aus der Verwandtschaft der *E. notata*, Wiedemann. Die *Chrysomyza*-Arten haben aber immer ganz hyaline Flügel und die charakteristische erste Hinterrandzelle. Nicht zu übersehen ist auch ihr eigentümlicher Thoraxbau. Die glänzend schwarzen *Ulidia*-Arten sind im Kopfbau gänzlich verschieden und nicht einmal durch entfernte Uebergänge verbunden.

Geographische Verbreitung der Arten. — Acht Arten aus der alten Welt, eine davon Kosmopolit.

1. *C. aenea*, Fabricius, Ent. Syst. Vol. 4, p. 335 (98) (1794) (*Musca*); Syst. Antl. p. 257 (5) (1805) (*Sargus*). — **Taf. 1, Fig. 8, 9.** — Süd-Asien und Mauritius.
   aenea, Wiedemann, Aussereur. zweifl. Ins. Vol. 2, p. 566 (2) (1830) (*Ulidia*); Loew, Mon. N. Amer. Dipt. Vol. 3, p. 12 (1873) (*Chrysomyza*); Hendel, Zool. Anzeig. Vol. 34, p. 614 (1), f. 4 (1909).
   syn. clausa, Macquart, Dipt. Exot. Vol. 2/3, p. 251, pl. 33, f. 9 (1843) (*Ulidia*); Schiner, Novara-Dipt. p. 281 (1868) (*Griphoneura*); V. d. Wulp, Tijdschr. v. Ent. Vol. 23, p. 180 (41), pl. 11, f. 3 (*Chloria*); Mik. Wien. Ent. Zeit. Vol. 19, p. 18 (1900); de Meijere, Tijdschr. v. Ent. Vol. 51, p. 125 (1908) (*Chloria*).
   melanopsis, Walker, List Dipt. Brit. Mus. Vol. 4, p. 1058 (1849) (*Ulidia*).
   divergens, Walker, Dipt. Saunders. Vol. 4, p. 397 (1852) (*Ulidia*).
   fulviceps, Walker, Trans. Ent. Soc. Lond. (new ser.) Vol. 4, p. 227 (1856) (*Ulidia*).
2. *C. africana*, Hendel, Zool. Anzeig. Vol. 34, p. 615 (2), f. 8 (1909). — Afrika.
3. *C. chalybea*, Hendel, ibidem, p. 620 (7), f. 6 (1909). — Turkmenien.
4. *C. demandata*, Fabricius, Ent. Syst. Suppl. p. 564 (1798) (*Musca*); Syst. Antl. p. 324 (37) (1805) (*Tephritis*). — Wahrscheinlich Kosmopolit. Europa, N.- und S.-Afrika, Asien, N.-Amerika.
   demandata, Meigen, Syst. Beschr. Vol. 5, p. 386 (1) (1826) (*Ulidia*); Macquart,

Suites à Buffon, Vol. 2, p. 504 (1) (1835) (*Ulidia*); Bouché, Naturg. d. Ins. p. 98(89)(1834)(*Ulidia*); Westwood, Introd. Mod. Class. Ins. Vol. 2, p. 149 (1840) (*Chrysomyza*); Loew, Dipt. Beitr. Vol. 1, p. 28 (1) (1845) (*Ulidia*); Zetterstedt, Dipt. Scand. Vol. 6, p. 2369 (1) (1847) (*Ulidia*); Lucas, Explor. Sc. Algérie, Vol. 3, p. 499(265) (1849)(*Ulidia*); Walker, Ins. Brit. Dipt. Vol. 2, p. 194(1)(1853)(*Ulidia*); Schiner, Fauna Austr. Vol. 2, p. 86 (1864) (*Chloria*); Loew, Mon. N. Amer. Dipt. Vol. 3, p. 65(1873); Rondani, Stirps Tanipezinæ, Bull. Soc. Ent. Ital. Firenze, Vol. 6, p. 5 (1874) (*Chrysomyza*); v. Röder. Berl. Ent. Zeitschr. Vol. 25, p. 210 (1881) (*Chrysomyza*); Brauer, Larven-Arbeit, p. 39, 85 (1883); Mik, Wien. Ent. Zeit. Vol. 2, p. 160 (1883); Vol. 15, p. 241 (1896); Johnson, Ent. News, Vol. 11, p. 609 (1900) N. Amerika; Bezzi, Bull. Soc. Ent. Ital. Firenze, Vol. 33, p. 24 (1901) (Keren, Afrika); ibidem, Vol. 39, p. 132 (1907); Becker, Zeitschr. f. Hym. Dipt. p. 385 (1907) Tunis; Aegypt. Dipt. p. 129 (1903); Hendel, Zool. Anzeig. Vol. 34, p. 617 (4), f. 5 (1909).

syn. splendida, Fallén, Dipt. Suec. Scenopin. p. 4 (1) (1817) (*Chrysomyza*).

smaragdi, Walker, List Dipt. Brit. Mus. Vol. 4, p 1059 (1849) (*Ulidia*); Hendel, Zool. Anzeig. Vol. 34, p. 614 (1909).

— *Ulidia divergens*, Walker = *Chrysomyza aenea*, Fabricius.

5. *C. flavipes*, Karsch, Berl. Ent. Zeitschr. Vol. 31, p. 380 (1887). **Taf. I, Fig. 10.** Afrika.

flavipes 1), Bezzi, Bull. Soc. Ent. Ital. Firenze, Vol. 39 p. 132, 138 (207) (1908); Hendel, Zool. Anzeig. Vol. 34, p. 616 (3), f. 7 (1909).

6. *C. longicornis*, Hendel, Zool. Anzeig. Vol. 34, p. 621 (8), f. 1 (1909). Formosa.

— *Ulidia melanopsis*, Walker = *C. aenea*, Fabricius.

— *Ulidia smaragdi*, Walker, List Dipt. Brit. Mus. Vol. 4, p. 1059 (1849) = *C. demandata*, Fabricius.

7. *C. smaragdina*, Loew, Sitz. Ber. Akad. Berlin, p. 661 (33) (1852) (*Ulidia*); Peters Reise Mossamb. Zool. Vol. 5, p. 32 (1862); Zeitschr. ges. Naturw. Vol. 42, p. 109 (1873) (*Chrysomyza*). Afrika.

smaragdina, Hendel, Zool. Anzeig. Vol. 34, p. 619 (6), f. 3 (1909).

syn. rufifrons, Walker, The Entomologist, Vol. 5, p. 345 (84) (1871) (*Ulidia*).

8. *C. tarsata*, Macquart, Dipt. Exot. Suppl. Vol. 4, p. 301 (1850) (*Ulidia*). Insel Bourbon, Süd-Afrika.

tarsata, Hendel, Zool. Anzeig. Vol. 34, p. 618 (5), f. 2 (1909).

9. **C. violacea, nov. sp.** 2). Afrika (Sierra Leone).

4. Genus EUXESTA, Loew

Euxesta. Loew, Berl. Ent. Zeitschr. Vol. 11, p. 297, pl. 2, f. 7-20 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 153, pl. 9, f. 7-18 (1873); V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 396 (1899); Aldrich, Cat. N. Amer. Dipt. p. 595 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 273, 278, f. 15-16 (1908); Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 151-172 (1909).

Synonyma : **Amethysa** (Macquart), Schiner, Novara-Dipt. p. 282, Anmerk. pro parte (1868).

Typische Arten : *E. annonae*, Fabricius, und *E. costalis*, Fabricius.

Originalbeschreibung : « Stirn von gleichmässiger, mittlerer Breite, eben, verhältnismässig rauh behaart. Fühler kurz; das dritte Glied rund oder rundlich eiförmig, mit dünner kahler Borste; Gesicht mehr oder weniger stark ausgehöhlt; Prælabrum vortretend. Thorax nur hinten beborstet. Schildchen gewölbt, vierborstig. Flügel : Hinterwinkel der Analzelle in eine Spitze ausgezogen; der

1) Das Exemplar des Herrn Prof. M. Bezzi gehört einer eigenen, mit *C. tarsata*, Macquart sehr nahe verwandten Art an.

2) **C. violacea, nov. sp.** — Flügel wie bei *C. flavipes*, Karsch (**Taf. 1, Fig. 10**). Der ganze Körper glänzend violettschwarz. Stirne, Hinterleib und Beine etwas rötlichbraun durchscheinend. Fühler dunkelbraun. Füsse gelblich weiss. Vorderfüsse schwarz, Metatarsus aber weiss. Schwinger kreideweiss. — 4 mm.

letzte Abschnitt der vierten Längsader konvergiert gegen die dritte Längsader; hintere Querader senkrecht. »

Charaktere. — Kopf von gewöhnlicher Grösse, nur wenig breiter als der Thorax und von rundlicher Gestalt. Im Profile ist der Kopf gewöhnlich deutlich etwas höher als lang, seltener stärker von vorne her zusammengedrückt (*M. geminata*), noch seltener so lang wie hoch (*E. tenuissima*). Die Stirne ist höchstens ein Drittel des Kopfes breit, in der Regel aber etwas schmäler, mit geringen Abweichungen fast parallel- und geradrandig, der Quere nach kaum etwas, der Länge nach mittelmässig gewölbt, im Profile nach vorne von mittlerer Neigung, nur unbedeutend über die Augen vortretend. Stirnwinkel von verschiedener Deutlichkeit, am prononziertesten bei *E. tenuissima*, nov. sp., wo er beinahe ein Rechter ist. Die Scheitelplatten sind gut differenziert, schmal, zugespitzt, liegen eng neben dem Augenrande und reichen nicht ganz bis zur Stirnmitte nach vorne. Die Ozellen sind immer von der Scheitelkante etwas entfernt und nach vorne gerückt. Sie bilden bei der ersten Artengruppe (*E. annonae*, Fabricius) ein längeres Dreieck, während die erste Ozelle bei der zweiten Gruppe (*E. costalis*, Fabricius) mit den zwei hinteren Ozellen in einem gleichseitigen Dreieck steht. Letztere Artengruppe zeichnet sich auch dadurch aus, dass über die Stirnmitte eine mehr weniger deutliche Querfurche zieht, die zum mindesten durch eine Konkavität angedeutet ist, ähnlich, wie wir sie bei der Gattung *Chrysomyza*, Fallén, sehen. Ferner ist die Stirnstrieme nur fein und kürzer, nie borstenartig behaart und sind die Börstchen am Augenrande der Vorderstirne, abgesehen von ihrer Kürze, nach auswärts gebogen. Die Stirnstrieme der Arten aus der Verwandtschaft der *E. annonae*, Fabricius, ist immer mit Kreuzbörstchen in verschiedener Zahl und Grösse bedeckt und die Borsten am Augenrande der Vorderstirne sind einwärts gebogen, gekreuzt und stark und können als untere Frontorbitalborsten bezeichnet werden. Auch die Querfurche der Stirne fehlt diesen Arten.

Kopfborsten : Jederseits zwei obere Frontorbitalborsten auf den Scheitelplatten, nach hinten gebogen. Die vordere derselben ist schwächer und kürzer und manchmal undeutlich erkennbar. Das Ozellarborstenpaar steht hinter der ersten Ozelle und ist immer gut, oft sogar sehr stark entwickelt. Die inneren Scheitelborsten konvergieren oder laufen höchstens parallel, die äusseren divergieren. Das Postvertikalpaar steht knapp hinter der Scheitelkante, von den Ozellen ziemlich entfernt und ist zurück geneigt. Die Stärke der Beborstung der Vorderstirne variiert nach den Arten.

Der Hinterkopf fällt gleich hinter den Vertikalborsten ab und ist oben für den Thorax nur seicht konkav, unten eben oder schwach gewölbt.

Der Klypeus zeigt im Profile gewöhnlich eine deutlich konkave Linie, welche selten stärker gebrochen oder anderseits fast gerade ist. Auch über die Facialienlinie tritt das Epistom nur wenig vor. Von vorne betrachtet wird der Klypeus von den divergierenden Gesichtsleisten begrenzt, nach unten zu allmählich breiter und zeigt über dem Mundrande — schon unter der Gesichtsmitte — eine mehr weniger deutlich ausgeprägte Querfurche. Neben derselben stossen auch die von unten aufsteigenden, borstig bewimperten Backenleisten mit den Gesichtsleisten in einem nicht immer deutlichen Eck zusammen. Vertiefungen für die Fühler sind kaum angedeutet. Der obere Klypeusteil ist fast eben, das Epistom deutlich der Quere nach gewölbt.

Die Stirnspalte zieht gewöhnlich in einem Bogen über die Fühlerwurzeln herum, eine deutliche Lunula bildend, seltener von einem Fühler zum anderen, wie z. B. bei *E. spoliata*, Loew. Die divergierenden Spaltenäste bleiben in geringer Entfernung neben den Facialien und münden in die meist deutlich differenzierte Backengrube, welche fast den ganzen Raum zwischen dem unteren Augenrande und den Peristomalien einnimmt.

Die Wangen sind nur schmal, die Backen ein Sechstel bis ein Halb des lotrechten Augendurchmessers breit. Letztere treten nur wenig sichtbar hinter den Augen hervor und sind nirgends herabgesenkt.

Die geneigten Fühler sind mittellang, immer merklich kürzer als das Untergesicht. Erstes Glied kaum bemerkbar, zweites kurz, oben immer mit einer abstehenden Borste versehen. Drittes Glied normal länglich rund, am Ende breit abgerundet, höchstens zweimal so lang wie breit, meist aber kürzer, manchmal sogar fast rundlich, oben konvex, gerade oder selbst schwach konkav. Bei einigen Arten (*E. acuticornis*, *arcuata*, *scoriacea*, und *tenuissima*), schneidet der gerade Oberrand das Ende des Fühlergliedes derart, dass oben eine ziemlich scharfe Ecke entsteht. Im Profile stehen die Fühler der Augenmitte gegenüber oder unter derselben.

Die unbandierten Augen sind lotrecht oval, nicht viel höher als lang, manchmal rundlich, so hoch wie lang. Der Winkel der Augenränder neben den Fühlern ist ein sehr stumpfer bei den mehr rundkopfigen Arten; er nähert sich einem Rechten bei den breitkopfigen Arten der zweiten Gruppe.

Mundöffnung mittelgross. Ebenso sind Rüssel und Prælabrum von mittlerer Grösse. Letzteres tritt aber immer deutlich vor. Die Taster sind verbreitert und unten beborstet.

Thorax gedrungen, metallisch grün gefärbt, Rücken fast quadratisch oder etwas länger als breit, ziemlich gewölbt. Quernahtäste vor den Seitenmitten. Pleuren ziemlich gleichmässig, diagonal nicht auffallend stärker gewölbt. Schildchen eiförmig zugespitzt, ein Viertel, meist aber fast ein Drittel des Rückens lang, nackt, oben gewölbt, seltener etwas abgeflacht, durch eine scharfe Querrinne vom Rücken getrennt und meist über dessen Fläche emporgerichtet.

Beborstung : Humerale eine, Notopleurale zwei, Supraalare drei; zwei Paare Dorsozentralborsten hinten, entweder ganz hinten, so dass das letzte Paar in gleicher Höhe mit dem Præscutellarpaar steht, oder weiter nach vorne gerückt, vom Schildchen entfernt. Vier schiefstehende Schildchenborsten, wovon die an der Spitze meist divergieren. Grundbehaarung des Rückens kurz, ziemlich in Längsreihen geordnet.

Mesopleuren und Sternopleuren behaart. Eine starke Mesopleuralborste unter schwächeren neben der Naht; eine Sternopleuralborste oben, hinten. Prothorakale sehr schwach, manchmal rudimentär.

Beine von mittlerer Stärke und Länge. Vorderhüften nur ganz unten beborstet. Hinterhüften aussen mit den zwei gewöhnlichen Borsten. Vorderschenkel posterodorsal mit zwei Borstenreihen, posteroventral mit einer Reihe meist sehr starker Borsten, gewöhnlich nur in der Spitzenhälfte. Mittelschenkel vorne mit einigen abstehenden Börstchen, hinten mit einer Reihe langer Wimpern besetzt. Hinterschenkel oben vor der Spitze mit den gewöhnlichen Börstchen. Mittelschienen innen mit einem Endsporn. Klauen und Pulvillen normal.

Hinterleib eiförmig, mit fünf sichtbaren, ungefähr gleichlangen Segmenten, kurzhaarig, vielfach aber seitwärts und an den hinteren Ringen mit Borsten an den Hinterrändern. Hypopyg klein, rundlich. Erstes Glied des Ovipositors gewöhnlich etwas länger als breit, dreieckig oder trapezförmig zugespitzt, mit schwach konvexen Aussenrändern. Es variiert spezifisch.

Der Flügel ist selten glashell, ungezeichnet, oft gefleckt, noch häufiger, aber mit Querbändern verziert. Es herrscht in der Zeichnung eine grosse Mannigfaltigkeit. Die Arten der zweiten Gruppe (Type *costalis*, Fabricius) haben die Flügel nur am Vorderrande, im Randmale und an der Flügelspitze gefleckt oder glashell, also eine Flügelzeichnung die jener der Gattung *Acrosticta* gleicht. Aber auch in der Aderung zeigt sich grosse Uebereinstimmung mit dieser Gattung, indem auch alle Adern fast durchwegs ganz gerade sind und die Subkosta ebenfalls geradlinig unter sehr spitzem Winkel in die Kosta mündet. Das Geäder ist daher eigentümlich steif und das Randmal schmal und spitzig, länger als bei den Arten der ersten Gruppe. Auch die Gestalt der Analzelle gleicht jener der Gattung *Acrosticta*.

Bei den Arten der ersten Gruppe, die sich um die Type *E. annonae*, Fabricius, reihen, ist der Flügel dagegen stets mit braunen Querbinden verziert. Nur einige wenige Arten schliessen sich an, bei denen der Flügel schwarzbraun von hyalinen Fenstern oder Flecken durchbrochen ist. Hier mündet die

Subkosta allmählich bogig in die Kosta, in grösserem Abstande von derselben verlaufend, wodurch das Randmal kürzer und breiter wird. Unter den Längsadern ist wenigstens die Radialis und der distale Abschnitt der Discoïdalis immer etwas, meist aber sehr auffallend gebogen oder gewellt. Die Analzelle ist vorne nicht durch eine leicht stumpfwinkelig gebrochene Querader, die einen kräftigen keilförmigen Zipfel erzeugt, abgeschlossen, sondern durch eine spitzwinkelig in die Zelle hineingedrückte Ader. Die Spitze der Analzelle ist daher im letzteren Falle immer kürzer und schmäler, oder wenn sie länger ist, wie bei *E. Bilimeki*, schlank und dünn.

Die Lage und der Verlauf der beiden Queradern ist variabel und für die Arten wesentlich. Die Subkosta erscheint meist nackt, seltener kurz geschoren pubeszent, bei einigen Arten der zweiten Gruppe aber gerade wie bei den *Acrosticta*-Arten im Endteile mit deutlichen Börstchen besetzt. Die Spitze der ersten Hinterrandzelle ist mehr oder weniger verengt. Die Analader geht allmählich in eine den Flügelrand erreichende Falte über. Axillarfalte deutlich. Lappen, Alula und Schüppchen normal.

Anmerkung. — Die Gattung *Euxesta* umfasst alle Ulidiinen mit glatter aber beborsteter Stirne, normalgrossem rundlichen Kopfe, mittellangen Fühlern, deren drittes Glied vorne rund ist, und einem für die Gruppe ganz gewöhnlich und normal geaderten Flügel. Das sie die artenreichste Gattung ist, darf es uns gar nicht wundern, wenn wir nach verschiedenen Richtungen hin Uebergänge konstatieren können. Die von Loew für die Gattung *Chaetopsis* angeführten Unterscheidungsmerkmale von *Euxesta*, die grössere Schlankheit des Körpers und der abweichende Gestalt des dritten Fühlergliedes, haben schon einige *Euxesta*-Arten zu eigen. *E. Schnusei* und noch mehr *E. tenuissima* geben in der Schlankheit der genuinen *Chaetopsis*-Arten nichts nach. Die spitze Vorderecke des dritten Antennengliedes zeigen auch die *Euxesta*-Arten *acuticornis, tenuissima, scoriacea* und *arcuata*. Als ausschlaggebend für die Zugehörigkeit zur Gattung *Chaetopsis* habe ich die Kombination der drei wesentlichsten Eigenschaften : spitzes drittes Fühlerglied, nackte Stirnstrieme (höchstens vorne ein Paar gekreutzter Börstchen) und schlanken Körperbau angesehen. Die Bestimmung mag es auch erleichtern, zu wissen, dass den *Chaetopsis*-Arten mit ähnlich gebänderten Flügeln wie bei den sich um *E. annonae*, Fabricius, gruppierenden Arten die dunkle Wurzelquerbinde fehlt. Schiner (1868) hatte bekanntlich beide Gattungen unter einem Namen zusammengefasst.

Die Arten der zweiten Gruppe unterscheiden sich eigentlich vom Genus *Acrosticta*, Loew, nur durch die glatte, nicht grubige Stirne. Umso interessanter war mir ein Exemplar einer noch unbeschriebenen *Euxesta*-Art dieser Abteilung, deren Vorderstirne deutliche, vertiefte Punkte aufwies. Da war nur mehr ein kleiner Schritt zur Gattung *Acrosticta*, wenn man von der bei dieser Gattung immer etwas grösseren Fühlerlänge absieht.

Die Querfurche der Stirne anderseits, wie sie ebenfalls die Tiere der zweiten Gruppe haben, zeigt deutliche Beziehungen zur Gattung *Chrysomyza*.

Geographische Verbreitung der Arten. — Vierundfünfzig Arten aus der neuen Welt.

1. *E. abdominalis*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 307 (9), t. 2, f. 15 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 164 (10), t. 9, f. 15 (1873). — Cuba.
2. *E. acuta*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 162 (11) (1900). — **Taf. 1, Fig. 23.** — Peru.
3. *E. acuticornis*, Hendel, ibidem, p. 165 (14) (1909). — **Taf. 1, Fig. 25.** — Paraguay.

— *E. aenea*, Macquart, nur fraglich gleich *E. Macquarti*, Schiner.

4. *E. alternans*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 308 (10), t. 2, f. 16 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 165 (11), t. 9, f. 16 (1873). — Brasilien, Mexico, Venezuela.

alternans, Giglio-Tos, Ditt. del Mess. Vol. 4, p. 46 (1895); V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 399, t. 11, f. 12 (1899).

syn. propinqua, Schiner, Novara-Dipt. p. 283 (155) (1868) (*Amethysa*); Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 154, Note 1 (1909).

5. *E. annonae*, Fabricius, Ent. Syst. Vol. 4, p. 358 (189) (1794) (*Musca*); Syst. Antl. p. 320 (19) (1805) (*Tephritis*). — **Taf. 1, Fig. 14, 15.** West-Indien, Süd-Amerika, Bolivia, Hawaiische Ins.
   annonae, Wiedemann, Aussereur. zweifl. Ins. Vol. 2, p. 463 (11) (1830) (*Ortalis*); Loew, Berl. Ent. Zeitschr. Vol. 11, p. 305 (7), t. 2, f. 13 (1867) (*Euxesta*); Mon. N. Amer. Dipt. Vol. 3, p. 162 (8), t. 9, f. 13 (1873); Roeder, Stett. Ent. Zeit. p. 348 (1885); Williston, Trans. Ent. Soc. Lond. p. 374 (1896); Grimshaw, Fauna Hawaii. Dipt. p. 44 (1901).
   syn. quadrivittata, Macquart, Suites à Buffon, Vol. 2, p. 456 (5) (1835) (*Urophora*).
— *Amethysa annonae*, Schiner, Novara-Dipt. p. 283 (154) (1868) = *E. eluta*, Loew.
6. *E. apicalis*, Williston, Trans. Ent. Soc. Lond. p. 375, t. 12, f. 128 (1896). West-Indien.
   apicalis, Coquillett, Proc. U. S. Nat. Mus. Vol. 22, p. 258 (1900).
7. *E. arcuata*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 166 (16) (1909). — **Taf. , Fig. 26.** Peru.
8. *E. argentina*, Brèthes, An. Mus. Buenos-Aires. Vol. (3) 4, p. 342 (1904). Argentinien.
   argentina, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 170 (1909).
9. *E. atripes*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 309 (11), t. 2, f. 17 (1867). Brasilien.
10. *E. basalis*, Walker, Dipt. Saund. Vol. 4. p. 373 (1852) (*Ortalis*). Nord-Amerika.
   basalis, Copuillett, Journ. New York Ent. Soc. Vol. 8, p. 24 (1900) (*Euxesta*); Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 170 (1909).
— *Amethysa basalis*, Schiner, Novara-Dipt. p. 284 (157) (1868) = *E. Schineri*, Hendel.
11. *E. Bilimeki*, Henkel, Ann. Mus. Nat. Hung. Vol. 7, p. 163 (12) (1909). Mexico.
12. *E. binotata*, Loew, Berl. Ent. Zeitschr Vol. 11, p. 304 (6), t. 2, f. 12 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 160 (7), t. 9, f. 12 (1873). Cuba.
13. *E. bipunctata*, Macquart, Suites à Buffon, Vol. 2, p. 505 (5) (1835); Dipt. Exot. Vol. 2/3, p. 252, t. 33, f. 8 (1843) (*Ulidia*). Siehe *E. pusio*, Loew. Brasilien.
14. *E. calligyna*, Bigot, Ann. Soc. Ent. Fr. p. 304, t. 7, f. 3 (1857) (*Amethysa*). **Taf. 1, Fig. 24.** Chile.
   calligyna, Schiner, Novara Dipt. p. 284 (158) (1868); Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 155 (1909).
15. *E. conserta*, V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 399, t. 11, f. 14 (1899). Mexico.
16. *E. costalis*, Fabricius, Ent. Syst. Vol. 4. p. 360 (1794) (*Musca*); Syst. Antl. p. 278 (25) (1805) (*Dacus*). West-Indien.
   costalis, Wiedemann, Aussereur. zweifl. Ins. Vol. 2, p. 464 (13) (1830) (*Ortalis*); Loew, Berl. Ent. Zeitschr. Vol. 11, p. 301 (4), t. 2, f. 10 (1867) (*Euxesta*); Mon. N. Amer. Dipt. Vol. 3, p. 158 (5), t. 9, f. 10 (1873); Roeder, Stett. Ent. Zeit. p. 348 (1885).
   syn. aculeatus, Fabricius, Syst. Antl. p. 275 (14) (1805) (*Dacus*).
17. *E. decisa*, Walker, Trans. Ent. Soc. Lond. (ser. 2), Vol. 4, p. 227 (1857) (*Herina*). Brasilien.
   decisa, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 170 (1909).
18. *E. eluta*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 312 (13), t. 2, f. 19 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 168 (13), t. 9, f. 18 (1873). Cuba, Bolivia, Peru, Argentien.
   eluta, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 159 (5) (1909).
   syn. annonnae, Schiner, Novara-Dipt. p. 283 (154) (1868) (*Amethysa*).
19. *E. fascipennis*, V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 398, t. 11, f. 10 (1899). Mexico.
20. *E. fenestrata*, Coquillet, Proc. Ent. Soc. Wash. Vol. 6, p. 95 (1904). Guatemala.
21. *E. geminata*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 158 (3) (1909). — **Taf. 1, Fig. 16.** Peru.
22. *E. insolita*, Hendel, ibidem, p. 168 (18) (1909). Peru.
23. *E. intermedia*, Lynch-Arribalzaga, Stett. Ent. Zeit. p. 191 (3) (1881). (*Amethysa*). Patagonien.
   intermedia, Hendel. Ann. Mus. Nat. Hung Vol. 7, p 171 (190) (*Euxesta*).

24. *E. intrudens*, Walker, Trans. Ent. Soc. Lond. (ser. 2), Vol. 4, p. 228 (1857) (*Herina*). Brasilien.
intrudens, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 171 (1909).

25. *E. juncta*, Coquillett, Proc. Ent. Soc. Wash. Vol. 6, p. 95 (1904). — **Taf. 1, Fig. 22.** Nicaragua, Peru.
juncta, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 160 (7) (1909).

26. *E. lacteipennis*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 156 (1) (1909). Bolivia.

27. *E. laticeps*, V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 397, t. 11, f. 7, 7*a* (1899). Mexico.

28. *E. latifascia*, Schiner, Novara-Dipt. p. 283 (156) (1868) (*Amethysa*). — **Taf. 1, Fig. 18.** Venezuela.
latifascia, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 161 (9) (1909).

29. *E. latifasciata*, V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 397, t. 11, f. 9 (1899). Mexico.

30. *E. leucomelas*, Walker, Trans. Ent. Soc. Lond. (ser. 2), Vol. 5, p. 325 (1860). Süd-Amerika.
leucomelas, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 171 (1909).

31. *E. lunata*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 157 (2) (1909). — **Taf. 1, Fig. 17.** Peru.

32. *E. Macquarti*, Schiner, Novara-Dipt. p. 282 (152) (1868) (*Amethysa*). Venezuela.
Macquarti, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 164 (13) (1909) (*Euxesta*).
syn. dub. sec. Schinero : *Trypeta aenea* 1), Macquart, Suites à Buffon, Vol. 2, p. 458 (13) (1835); Dipt. Exot. Vol. 2/3, p. 222, t. 30, f. 7 (1843) (*Urophara*). Süd-Amerika.

33. *E. maculata*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 169 (20) (1909). Bolivia, Peru.

34. *E. major*, V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 398, t. 11, f. 11 (1899) Mexico.

35. *E. minor*, Cresson, Trans. Amer. Ent. Soc. Vol. 32, p. 286, t. 6, f. 12 (1906). Neu-Mexico.

36. *E. nigricans*, V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 397, t. 11, f. 8 (1899). Mexico.

37. *E. nitidiventris*, Loew, Mon. N. Amer. Dipt. Vol. 3, p. 157 (4) (1874). — **Taf. 2, Fig. 43, 45.** Nord-Amerika.
nitidiventris, Brues, Psyche, Vol. 9, p. 353, fig. p. 354, Larve (1902).

38. *E. notata*, Wiedemann, Aussereur. zweifl. Ins. Vol. 2, p. 462 (9) (1830) (*Ortalis*). Nord-Amerika.
notata, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 300 (3), t. 2, f. 9 (1867) (*Euxesta*); Mon. N. Amer. Dipt. Vol. 3, p. 156 (3), t. 9, f. 9 (1873); Smith, Insect. Life, Vol. 6, p. 270, Biologie (1894); Howard, Ins. Faun. Human excrem. Proc. Wash. Acad. Sc. Vol. 2, p. 585 (1900); Cresson, Trans. Amer. Ent. Soc. Vol. 32, p. 287 (1906).

39. *E. obliqua*, Thomson, Freg. Eugen. Resa, Dipt. p. 574, 241 (1868). Peru.
obliqua, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 172 (1909).

40. *E. obliquestriata*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 167 (17) (1909). — **Taf. 1, Fig. 19.** Süd-Amerika.

— *E. parvula*, V. d. Wulp, Term. Füzet. Budap. Vol. 20, p. 141 (20) (1897) = *Acidia*-Art, Tephritine.

— *E. platystoma*, Thomson = *E. spoliata*, Loew. Siehe auch V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 397 (1899).

— *E. prima*, Osten-Sacken, Ann. Mus. Stor. Nat. Genova, Vol. 16, p. 470 (1881) aus Celebes = *Pseudeuxesta* ead.

— *E. propinqua*, Schiner (*Amethysa*) = *E. alternans*, Loew.

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(1) Besteht diese Synonymie zurecht, muss die Art *Euxesta aenea*, Macquart, heissen!

41. *E. pulchella*, Cresson, Trans. Amer. Ent. Soc. Vol. 32, p. 287, t. 6, f. 11 (1906). — Neu-Mexico.

— *E.* ? *punctifrons*, Thomson, Freg. Eug. Resa, Dipt. p. 573 (240) (1868) (*Ortalis*). — Puna, Indien.

punctifrrons, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 172 (1900).

42. *E. pusio* 1), Loew, Berl. Ent. Zeitschr. Vol. 11, p. 299 (2), t. 2, f. 8 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 155 (2), t. 9, f. 8 (1873). — Cuba.

43. *E. quaternaria*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 302 (5), t. 2, f. 11 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 159 (6), t. 9, f. 11 (1873). — Cuba, Florida.

44. *E. Schineri*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 160 (8) (1909). — Süd-Amerika.
— Taf. 1, Fig. 20.

syn. basalis, Schiner, Novara-Dipt. p. 284 (157) (1868) (*Amethysa*).

45. *E. Schnusei*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 161 (10) (1909). — Peru.

46. *E. scoriacea*, Loew, Zeitschr. ges. Naturw. Vol. 48, p. 336 (14) (1876). — Nord-Amerika.
— Taf. 4, Fig. 99, 100.

47. *E. sororcula*, Wiedemann, Aussereur. zweifl. Ins. Vol. 2, p. 463 (10) (1830) (*Ortalis*). — Süd-Amerika.

sororcula, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 313 (14) (1867) (*Euxesta*); Schiner, Novara-Dipt. p. 283 (153) (1868) (*Amethysa*); Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 167 (1909).

— *E* ? *spathulata*, Thomson, Freg. Eugen. Resa, Dipt. p. 574 (242) (1868) (*Ortalis*). — Puna, Indien.

? *spathulata*, Hendel, Ann. Mus Nat. Hung Vol. 7, p. 172 (10) (1909).

48. *E. spoliata*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 298 (1), t. 2, f. 7 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 154 (1), t. 9, f. 7 (1873). — Zentral- und Süd-Amerika, Brazilien, Argentinien.

spoliata, Roeder, Stett. Ent. Zeit. p. 348 (1885); V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 397 (1899); Coquillett, Proc. U. S. Nat. Mus. Vol. 22, p. 258 (1900).

— *E. spoliata*, Williston = *E. Willistoni*, Coquillett.

49. *E. stigma*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 159 (6) (1909). — Peru.

50. *E. stigmatias*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 310 (12), t. 2 f. 18 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 166 (12), t. 9, f. 17 (1873). — Zentral- und Süd-Amerika.

stigmatias, Roeder, Stett. Ent. Zeitschr. p. 348 (1885); Williston, Trans. Ent. Soc. Lond. p. 374 (1896); V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 399, t. 11, f. 13 (1899); Coquillett, Proc. U. S. Nat. Mus. Vol 22. p. 258 (1900); Cresson, Trans. Amer. Ent. Soc. Vol. 32, p. 387 (1906).

51. **E. tenuissima, nov. sp.** 2). **— Taf. 2, Fig. 43.** — Nord-Amerika, Georgia.

52. *E. Thomae*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 306 (8), t. 2, f. 14 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 163 (9), t. 8, f. 14 (1873). — West-Indien.

Thomae, Coquillet, Proc. U. S. Nat. Mus. Vol. 22, p. 257 (1900).

53. *E. Wettsteini*, Hendel, Ann. Mus. Nat. Hung. Vol. 7, p. 165 (15) (1909). — Brasilien.
— Taf. 1, Fig. 21.

54. *E Willistoni*, Coquillett, Journ. New York Ent. Soc. Vol. 8, p. 24 (1900). — Nord-Amerika.

syn. spoliata, Williston, Dipt. of the Death Vall. Exped. North Amer. Fauna, Vol. 7, p. 257 (1893).

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1 Diese Art ist vielleicht der *Ulidia bipunctata*, Macquart (1843), gleich.

2) Als ein interessanter Uebergang zur Gattung *Chaetopsis*, Loew, ist folgende neue Art aufzufassen :

Euxesta tenuissima, nov. sp. — 1 ♂, Nord-Amerika, Georgia. — Unter Benützung meiner « Bestimmungstabelle der Arten » kommt man auf Punkt 8. Charakterisiert ist die neue Art durch grosse Schlankheit des ganzen Körpers und die eigentümliche Kopfform. Im Profile ist nämlich der Kopf gerade so lang wie hoch und die Stirne springt unter einem rechten Winkel vor. Das Untergesicht weicht in einer schwach konkaven Linie zurück und die Backen sind ausserordentlich schmal. Scheitelplatten, Ozellendreieck, Hinterkopf, Thorax und Schildchen bläulich grün, ziemlich dicht weisslich bereift. Stirne, Wangen und Backengruben rotgelb, matt bereift. Untergesicht mit blauem Metallschimmer, ganz weisslich bereift. Mundrand sogar etwas zurückweichend. Taster gelb, wie der Rüssel aussergewöhnlich klein. Prælabrum sehr klein und schmal. Stirne sehr rauh behaart. Auch auf der Strieme stehen von oben bis unten starke Kreuzborstenpaare. Die Fühler sind vorgestreckt, rotgelb. Das dritte Glied ist am Ende gebräunt und zeigt ein ziemlich scharfes Obereck, wie *Chaetopsis aenea*, Wiedemann.

Die Beine sind ganz einfärbig rotgelb. Der Hinterleib ganz rotgelb, nur das fünfte Tergit schwarz. Dasselbe ist fast so lang wie der halbe Hinterleib und erscheint mir auf der Oberfläche wie grubig punktiert.

Den Flügel zeigt die **Fig. 43** auf **Taf. 2** zur Genüge. Würde man von der beborsteten Stirnstrieme und der Wurzelquerbinde am Flügel absehen, so müsste man diese Art wegen der Gestalt des dritten Fühlergliedes und der Schlankheit des Körpers für eine *Chaetopsis* halten.

5. Genus ZACOMPSIA, Coquillett

Zacompsia. Coquillett, Ent. News, Philad. Vol. 12, p. 15 (1901); Aldrich, Cat. N. Amer. Dipt. p. 597 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 278 (1908).

Charaktere. — « Near *Euxesta*, but the third antennal joint twice as wide as long and more slender, no acrostichal bristles, and the color not metallic. Body rather slender, front not punctured nor rugose, at the upper edge about one and one half times as wide as either eye, antennæ as long as the face, the third joint about twice as long as wide, rounded at the apex, arista bare, occiput strongly convex, cheeks about one-fifth as wide as the eye-height, proboscis short and robust, palpi clavate; thorax bearing one pair of dorsocentral, two supra-alar, two posthumeral, one humeral, one mesopleural and one sternopleural bristle, scutellum bearing four bristles, femora bare on the under side; first vein bare, third and fourth veins converging toward their apices, lower outer angle of anal cell prolonged in the form of a rather long lobe, small and posterior crossveins nearly perpendicular. »

Typische Art : *Z. fulva*, Coquillett.

« Reddish yellow; the proboscis, apex of the third joint of antennæ, the arista except its base, an ocellar dot, small spot on occiput above the neck, the tibiæ, whole of front tarsi and apices of the others, brown; all bristles and the short bristly hairs black; wings hyaline, marked with four indistinct grayish cross-bands; the first is below the humeral cross-vein; the second is very broad and extends from the stigma to beyond the fifth vein; the third begins midway between apices of the first and second veins and passes over the hind cross-vein; the fourth borders the tip of the wing from slightly before apex of second vein to slightly beyond apex of the fourth; body subopaque, not pruinose except the white pruinose pleura; front opaque, vertex polished, orbits and frontal lunule white pruinose; length 4-5 mm. »

Geographische Verbreitung der Art. — Nord-Amerika.

1. *Z. fulva*, Coquillett, Ent. News Philad. Vol. 12, p. 15 (1901). Nord-Amerika, Texas.

6. Genus PAREUXESTA, Coquillett

Pareuxesta. Coquillett, Proc. Acad. Sc. Wash. Vol. 3. p. 376 (1901).

Typische Art : *P. latifasciata*, Coquillett.

Originalbeschreibung. — « Near *Euxesta*, but the first vein covered with bristles on its apical third. Front not punctured, sparsely covered with bristly hairs except around the ocelli, slightly tapering to the lower end, where it is almost as wide as either eye, antennæ two-thirds as long as the face, the third joint ellipsoidal, one-half longer than wide, twice as long as the second, which is scarcely longer than wide, arista bare, face in profile concave, not carinate nor foveolate, projecting slightly further forward at oral margin than at base of antennæ, clypeus prominent, proboscis short and swollen, palpi well developed, of nearly an equal width, cheeks less than one-fourth as wide as the eye-height, occiput slightly concave on its upper part, thorax bearing one pair of acrostichal bristles, two dorsocentral, three supra-alar, one humeral, two posthumeral (Notopleuralborsten in unserem Sinne), one mesopleural and one sternopleural, scutellum bearing four bristles, abdomen ovate, legs short and robust, calypteres small, wings slightly tapering to their apices, fourth vein distinctly converging toward the third, lower outer angle of anal cell drawn out in a long lobe, small cross-veins perpendicular, the hind one nearly so, stigma short, distance between apices of auxiliary and first veins much less than length of hind cross-vein. »

Charaktere. — Der mir vorliegende Gattungs-Typus gleicht so sehr einer Art der Gattung *Euxesta* aus der Gruppe der *annonae*, das ich nur einige mir wichtig scheinende Merkmale neben den Unterschieden hier noch zu erwähnen habe. Die Stirnstrieme ist rauhhaarig, die Borsten am Augenrande sind aber sonderbarer Weise hauptsächlich nach aussen gebogen. Desgleichen bilden auch die Ozellen ein gleichseitiges Dreieck, also wie bei der zweiten Gruppe der *Euxesta*-Arten, mit anderer Flügelzeichnung. Eine Querfurche der Stirn fehlt. Der Kopf ist etwas von vorne her zusammengedrückt, die Augen daher ziemlich lang oval. Das dritte Antennenglied ist rundlich oval. Der Klypeus seicht konkav. Der Augenwinkel neben den Fühler stark abgerundet.

Grundbehaarung des quadratischen Rückens rauh. Schildchen ein Drittel desselben lang, gewölbt, oben nackt.

Erstes Glied des Ovipositors ein und einhalbmal so lang als an der mit dem fünften Tergit gleichbreiten Wurzel breit, trapezförmig, am Ende wenig schmäler, an den Seiten gerade.

Flü el wie bei den *Euxesta*-Arten der ersten Gruppe. Die Subkosta ist hinter der Mediastina deutlich beborstet. Die Analzelle ist gross, vorne durch eine im stumpfen Winkel gebrochene Querader abgeschlossen und unten in einen mittellangen spitzen Zipfel ausgezogen. Die Analader endet in geringer Entfernung hinter der Zelle stumpf, ohne sich als Falte bis zum Flügelrande fortzusetzen. Axillarfalte deutlich. Die Cubitalis und Discoïdalis konvergieren kaum merklich gegen die Flügelspitze hin.

Anmerkung. — Die vorstehenden Angaben beziehen sich, wie schon gesagt, auf den Gattungs-Typus, die übrigen Arten kenne ich nicht. Bedenkt man aber, dass die einzigen Unterscheidungsmerkmale — die beborstete Subkosta und die stumpf endende Analader — bei der sonst ausserordentlich nahen Verwandtschaft mit den *Euxesta*-Arten eigentlich höchst subtile sind, ja dass mehrere *Euxesta*-Arten eine behaarte bis selbst borstliche Subkosta besitzen, so muss man die Gattung für etwas problematisch halten.

Geographische Verbreitung der Arten. — Vier Arten von den Galapagos Inseln.

1. *P. hyalinata*, Coquillett, Proc. Acad. Sc. Wash. Vol. 3, p. 377 (1901).
2. *P. latifasciata*, Coquillett, ibidem, p. 376 (1901). — **Taf. 2, Fig. 29-31.**
3. *P. intermedia*, Coquillett, ibidem, p. 377 (1901).
4. *P. obscura*, Coquillett, ibidem, p. 377 (1901).

7. Genus PSEUDEUXESTA, nov. gen.

Typische Art : *P. prima*, Osten-Sacken.

Charaktere. — Kopf gross, etwas aufgeblasen, wenig breiter als der Thorax. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 5 : 4, von vorne wie 9 : 14. Die Stirne ist vorne ein Drittel des Kopfes breit und verengt sich nur wenig gegen den Scheitel zu; sie ist der Quere nach fast eben, der Länge nach aber stark gewölbt. Ozellenplatte und Scheitelplatten kaum sichtbar abgegrenzt, sehr klein. Die Ozellen liegen eng beisammen, in Form eines gleichseitigen Dreiecks, zwischen den oberen Augenecken am Scheitel. Im Profile ist die Stirne nicht stark geneigt, tritt merklich über die Augen vor — man kann die Wangen in ziemlicher Breite sehen — und bildet mit der Klypeuslinie einen abgerundet stumpfen Stirnwinkel, von geringer Auffälligkeit.

Kopfborsten : Jederseits zwei schwache obere Frontorbitalborsten, hintereinander, ganz oben neben dem Augenrande, nach hinten gebogen. Die vordere derselben meist sehr schwach. Ozellarpaar hinter der ersten Ozelle, klein und schwach, nach vorne divergierend. Das äussere Vertikalpaar steht in der Verlängerung der Stirnaugenränder, das innere ist einwärts gerückt und konvergiert. Das starke

FAM. MUSCARIDÆ

SUBFAM. ULIDIINÆ

FAM. MUSCARIDÆ

SUBFAM. ULIDIINÆ

Postvertikalpaar steht in mehr als Ozellendistanz hinter den Punktaugen am Hinterkopf und ist nach hinten geneigt. Die Stirnstrieme hat keine Borsten, sondern ist nur kurz und fein, ziemlich gleichmässig und dicht behaart. Eine Querfurche fehlt derselben. Ein dreieckiger Raum vor der Ozellenplatte ist unbehaart.

Der Scheitel mit dem Zerebrale und der Hinterkopf hinter den Augen treten wulstig, konvex vor, die Scheitelkante fehlt eigentlich, da die Stirne in allmählicher Krümmung in den Hinterkopf übergeht. Letzterer ist nur in der Halsgegend schwach für den Thorax ausgehöhlt, rund herum aber konvex.

Der Klypeus zeigt im Profile eine fast gerade, nur schwach konkave Linie. Der Mundrand tritt nicht vor. Von vorne betrachtet fällt es auf, dass die Klypeusplatte mit dem angrenzenden Untergesichte ungefähr eine Ebene bildet, dass er also kaum merklich tiefer liegt, kaum der Quere nach gewölbt ist und nirgends nennenswert vortritt oder ausgehöht ist. Die das Epistom oben gewöhnlich begrenzende Querfurche ist nur durch einige schwache Runzeln angedeutet. Am deutlichsten sind noch die schwachen Rinnen unter den Fühlern zu bemerken. Die Facialien, aussen von den parallelen Stirnspaltenästen begleitet, laufen nach unten nicht auseinander, weshalb auch der Klypeus unten nicht breiter als oben ist. In geringer Entfernung über dem unteren Mundrande treffen die Gesichtsleisten mit den flachen, kaum merklich bewimperten Backenleisten in einem abgerundeten Eck zusammen.

Die Stirnspalte zieht in einem Kreisbogen über die Fühlerwurzeln hinweg und bildet eine grosse, sogar etwas aus dem Spalt hervortretende Lunula; ihre Aeste bleiben vom Augenrande auffallend weit entfernt.

Die Wangen sind relativ breit, nirgends vertieft, ebensowenig die Backengruben; die Backen ein Drittel des lotrechten Augendurchmessers breit, unten wagrecht und verleihen mit dem flachen Untergesicht, den breiten Wangen und dem wulstigen Hinterkopfe das kugelige, aufgeblasene Aussehen des ganzen Kopfes.

Die abstehenden Fühler sind sehr kurz. Das zweite Glied hat oben eine aufrechte Borste. Das dritte Glied ist rundlich, nicht länger als breit und trägt oben im Wurzeldrittel die nackte, basal verdickte Arista. Die Fühler stehen in den Dritteln der dortigen Stirnbreite und im Profile der Augenmitte gegenüber

Die ungezeichneten Augen sind rundlich oval und fast lotrecht gestellt. Ihr Randwinkel neben den Fühlern ist ein abgerundet stumpfer.

Mundöffnung gross, besonders breit, am vorderen Rande etwas hinaufgezogen. Dort liegt das mittelgrosse Prælabrum mit dem Klypeus in einer Ebene. Taster verbreitert, unten borstlich. Rüsse dick.

Thorax plump, rundlich, wie aufgeblasen. Rücken so lang wie breit, oben ziemlich stark gewölbt, die Quernahtäste in den Seitenmitten. Pleuren fast gleichmässig gewölbt, an der Mesopleuralnaht etwas vortretend, vorne wenig vertieft. Schildchen breit eiförmig, ein Viertel des Rückens lang, oben unbehaart und gewölbt, durch eine scharfe Querrinne getrennt, aber nicht emporgerichtet, am Rande mit vier schiefen, fast parallelen Borsten.

Beborstung : Grundbehaarung des Rückens sehr kurz, fein und dicht, unregelmässig geordnet. Eine Humerale, zwei Notopleurale, drei Supraalare, ein Paar Dorsozentralborsten ganz hinten und dazwischen ein Paar Præscutellarborsten.

Meso- und Sternopleuren behaart. Eine starke Mesopleuralborste oben, eine Sternopleurale oben, hinten. Prothorakale sehr schwach.

Beine von entsprechender Grösse und Stärke, genau wie bei der Gattung *Euxesta* beschrieben.

Hinterleib eiförmig, mit fünf sichtbaren Ringen. Das fünfte Tergit ist beim ♂ verlängert, beim ♀ verkürzt. Es zeichnet sich beim ♂ noch überdies durch seinen Glanz und seine nadelrissige Skulptur

aus. Das kleine Hypopyg liegt ventralwärts versteckt. Das erste Glied des Ovipositors hat eine an der Spitze abgestutzte herzförmige Gestalt und ist etwas länger als breit. Die Behaarung des Hinterleibes ist nur kurz und fein.

Vom Flügel gilt das, was ich von den *Euxesta*-Arten aus der Verwandtschaft der *costalis*, Fabricius, gesagt habe, aber mit folgenden, wichtigen Unterschieden : Die Subkosta ist nicht gerade, sondern biegt sich vor der Mündung zur Kosta auf. Sie mündet in so geringem Abstande hinter der sehr langen und ihr dort sehr genäherten Mediastina, dass beide Längsadern fast zusammenfliessen und ein mehr weniger horniges, sehr kurzes und kleines Randmal bilden. Die Subkosta ist im letzten Teile sehr kurz behaart, bei gewöhnlicher Vergrösserung freilich nackt.

Anmerkung. — Ich halte die durch die Kopfbildung und die Flügeladerung gegebenen Unterschiede nebst der geographischen Verbreitung für genügende Gründe, die Gattung *Pseudeuxesta* von den amerikanischen Formen zu trennen.

Geographische Verbreitung der Art. — Eine Art aus der orientalischen Region.

1. *P. prima*, Osten-Sacken, Ann. Mus. Stor. Nat. Genova, Vol. 16, p. 470 (1881) (*Euxesta*). — **Taf. 2, Fig. 27, 28.** Celebes, Neu-Guinea.
prima, Kertész, Term. Füzet. Vol. 22, p. 188 (1899) (*Euxesta*).

8. Genus CHÆTOPSIS, Loew

Chætopsis. Loew, Berl. Ent. Zeitschr. Vol. 11, p. 315 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 169 (1873); Aldrich, Cat. N. Amer. Dipt. p. 597 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 278 (1908); Hendel, Wien. Ent. Zeit. Vol. 28, p. 254 (1909).

Synonyma : **Stenomyia.** Loew, Berl. Ent. Zeitschr. Vol. 11, p. 320 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 173 (1873); Aldrich, Cat. N. Amer. Dipt. p. 598 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 278 (1908).

Amethysa (Macquart). Schiner, Novara-Dipt. p. 282, Anmerkung, pro parte (1868).

Typische Art : *C. aenea*, Wiedemann.

Charaktere. — Kopf von normaler Grösse, nur wenig breiter als der Thorax. Beim Typus verhält sich der lotrechte Kopfdurchmesser zum wagrechten wie 11 : 9, von vorne wie 10 : 11. Man sieht also, der Kopf ist ziemlich rundlich. Er ist nie stärker von vorne her zusammengedrückt, bei *C. tenuis*, Loew, sogar etwas länger als hoch. Die Stirne ist verschieden breit, bei *C. angusta* und *laticauda* breiter als ein Drittel des Kopfes und fast parallelrandig, bei *C. aenea*, *apicalis* und *tenuis* so breit wie ein Auge und nach oben hin kaum merklich verengt, bei *C. mucronata* vorne ein Drittel des Kopfes breit und oben auf ein Viertel verengt, endlich bei *C. praeceps*, vorne nur ein Viertel und oben sogar nur ein Sechstel des Kopfes breit. Der Stirnwinkel der Arten an den Fühlerwurzeln im Profile variiert mit der Neigung der Stirne. Er ist spitz bei *C. tenuis*, ein Rechter bei *C. laticauda* und ein verschieden stumpfer bei den anderen Arten. Je spitzer der Stirnwinkel, desto weniger geneigt ist die Stirnfläche und desto mehr tritt die Stirne im Profile vor die Augen vor. Der Quere nach ist die Stirnfläche mässig gewölbt. Ozellen- und Scheitelplatten deutlich differenziert. Erstere tragen die von der Scheitelkante ein ziemliches Stück vorgerückten Ozellen in einem Dreieck, das bei den schmalstirnigen Arten am spitzigsten ist. Die schmalen Scheitelplatten liegen dem Augenrande an und reichen nicht bis zur Stirnmitte vor.

Kopfborsten : Je eine starke obere, nach hinten gebogene Frontorbitalborste an der Spitze der Scheitelplatte und manchmal eine kurze, schwache Borste unmittelbar davor. Das starke, nach vorn geneigte und divergierende Ozellarpaar ist hinter der ersten Ozelle inseriert. Das äussere Vertikalpaar

ist schwach entwickelt oder kann auch fehlen. Das innere Paar dagegen ist sehr kräftig und ungefähr parallel. Es steht in der Verlängerung der Stirnaugenränder oder bei den Arten mit breiterer Stirne wenig innerhalb derselben. Das an der Scheitelkante stehende Postvertikalpaar ist nach hinten geneigt. In der unteren Stirnhälfte befinden sich am Augenrande auf den Wangenplatten jederseits eine Reihe einwärts gebogener unterer Frontorbitalborsten. Die Stirnstrieme zwischen denselben ist nackt oder höchstens vorne mit ein bis zwei Paar Kreuzbörstchen versehen.

Der Hinterkopf ist hinter der abgerunden Scheitelkante flach, oben nicht ausgehöhlt; nur die beiden schmalstirnigen Arten (*C. praeceps* und *mucronata*) zeigen oben eine seichte Konkavität. Der Hinterkopf tritt etwas hinter die oberen Augenränder vor.

Der Klypeus weicht im Profile bald stärker, bald weniger zurück, am stärksten natürlich bei den Arten mit vorspringender Stirne, und bildet eine gerade oder fast gerade und nur etwas konkave Linie. Der Mundrand ist flach und tritt nicht vor. Von vorne betrachtet ist die Klypeusplatte ziemlich eben, zeigt aber einen flachen Längskiel, seichte, selten tiefere Rinnen (*C. laticauda*) unter den Fühlerwurzeln neben den Gesichtsleisten und eine nur an den Seiten deutlichere, den Gesichtslängskiel nicht durchfurchende Querrinne von geringer Schärfe. Dieselbe liegt in geringer Höhe über dem unteren Mundrande, weshalb das dadurch unvollkommen abgesonderte kaum der Quere nach gewölbte Epistom nur sehr niedrig erscheint. Der Klypeus ist oben und unten von ziemlich gleicher Breite. Die zwei Arten *C. praeceps* und *mucronata* machen wieder eine Ausnahme, indem bei ihnen die Querfurche des Klypeus tiefer geht, das Epistom dadurch im Profile stärker vortritt und deutlicher der Quere nach gewölbt ist als bei den anderen Arten.

Die Stirnspalte zieht in einem Kreisbogen über die Fühlerwurzeln hinweg und erzeugt dadurch eine deutliche Lunula. Die Spaltenäste divergieren nach unten hin nur etwas gegen das Ende zu und bleiben knapp neben den Facialien, welche den Klypeus nach unten hin nicht breiter werden lassen und in der Höhe der genannten Querrinne mit den sehr sanft von unten aufsteigenden bewimperten Peristomalien eine deutliche Ecke bilden.

Die Wangen sind nur schmal, die Backen höchstens ein Viertel des lotrechten Augendurchmessers breit, unten fast wagrecht. Sie treten auch im Profile etwas hinter dem schiefen Augenrande hervor. Zwischen dem unteren Augenrande und den borstlich bewimperten, im Profile nur sehr sanft nach vorne hin aufsteigenden Backenleisten sind die nackten Backengruben durch Farbe und Form deutlich von dem dahinter liegenden behaarten Teil des unteren Hinterkopfs unterscheidbar.

Die mittellangen Fühler sind wenig geneigt oder von mittlerer Neigung, ungefähr in den Stirndritteln und der Augenmitte gegenüber inseriert. Das erste Glied ist fast versteckt, das zweite kurz, oben mit einer abstehender Borste versehen, das dritte höchstens zweimal so lang wie breit, am Unterrande konvex gebogen, oben gerade oder deutlich konkav, so dass oben am Ende eine scharfe Ecke oder eine deutliche Spitze entsteht. Die basale Arista ist nackt, wurzelwärts etwas stärker.

Die im Leben ungezeichneten Augen sind rundlich oval, nicht oder wenig höher als lang, schief liegend. Neben den Fühlern ist der Augenwinkel ein stumpfer.

Mundöffnung und Rüssel mittelgross, Labellen besonders deutlich abgesetzt. Taster verbreitert, unten beborstet. Prælabrum klein, schmal und niedrig, nur wenig vortretend, manchmal (*C. laticauda*) fast rudimentär.

Thorax mittelstark bis schlank. Rücken länger als breit, mässig gewölbt, vorne mehr abgerundet als eckig, die Quernahtäste in den Seitenmitten. Mesopleuren diagonal stärker gewölbt, über den Vorderschenkeln eingedrückt. Schildchen circa ein Drittel des Rückens lang, oben gewölbt und nackt, durch eine Querfurche scharf vom Rücken getrennt und über denselben etwas emporgerichtet, eiförmig zugespitzt, am Rande mit vier schiefstehenden und fast parallelen Borsten versehen.

Beborstung : Grundbehaarung des Rückens kurz und fein, in Längsreihen geordnet, in der

Linie der Dorsozentralen stärker entwickelt. Humerale eine, Notopleurale zwei, Supraalare drei, Dorsozentrale ein oder zwei Paar hinten. Zwischen oder etwas hinter den Borsten des letzten Paares ein paar Præscutellare (*C. aenea* und *apicalis*), das auch fehlen kann.

Meso- und Sternopleuren behaart. Eine stärkere Mesopleuralborste neben der Naht neben ein oder mehreren Haaren. Eine Sternopleuralborste oben, hinten. Prothorakale vorhanden, schwach.

Beine dem Thorax angemessen mehr oder weniger schlank, nie aber schwach. Vorderhüften nur unten beborstet. Vorderschenkel posterodorsal mit zwei Reihen von mittellangen Borsten der Länge nach, posteroventral nur in der Spitzenhälfte mit stärkeren Borsten besetzt. Mittelschenkel vorne abstehend borstlich, hinten *nicht gewimpert*. Hinterschenkel anterodorsal vor der Spitze meist mit ein paar Börstchen. Mittelschienen innen mit einem starken Endsporn. Klauen und Pulvillen gut entwickelt. Füsse kräftig.

Hinterleib schlank, langgestreckt, in der Mitte etwas breiter mit fünf bis sechs sichtbaren Segmenten. Beim ♂ fünf Ringe, der letzte länger als die vorderen. Hypopyg klein, rundlich, ventralwärts gelegen. Beim ♀ ist hinter dem fünften Tergit (*C. tenuis*) manchmal noch ein schmaler Rand des sechsten, sonst versteckten zu sehen. Das erste Glied des Ovipositors ist breit, immer so breit wie der Hinterleib, trapezförmig, an den Seiten etwas konvex, am Ende breit abgestutzt, oben hohl, also schaufelartig, kürzer bis länger als breit. Die Behaarung des Hinterleibes ist kurz und fein, nur hinten an den Seiten der Hinterränder der Tergite länger; am rauhesten bei *C. laticauda*, selbst auf der Legeröhre.

Flügel von normalen Umriss, mit drei dunklen Querbinden, diejenige an der Schulterquerader fehlt und ist nur bei *C. praeceps* angedeutet, oder verwaschen braun mit milchweiss und glashell wechselnd. Kosta gerade. Subkosta sich allmählich zur Kosta aufbiegend, immer vor der Flügelmitte und in geringer Entfernung hinter der Mediastina mündend. Randmal daher nur klein und kurz. Radialis immer geschwungen. Die sanft gebogenen letzten Abschnitte der Cubitalis und Discoïdalis konvergieren meist deutlich gegen die Flügelspitze, wodurch die erste Hinterrandzelle verengt erscheint. Am wenigsten ist dies bei *C. mucronata* der Fall. Queradern gerade und meist fast senkrecht stehend. Die kleine steht auf oder vor der Flügelmitte. Ihre Stellung in Bezug auf die Diskoïdalzelle ist verschieden. Die Analzelle ist vorne durch eine in einem wenig merklichen stumpfen (*C. tenuis* und *laticauda*) bis spitz in die Zelle hineingedrückten Winkel gebrochene Querader geschlossen. Der Zipfel unten an der Zelle ist kurz bis mittellang, am spitzigsten und längsten noch beim Gattungstypus, am wenigsten ausgebildet bei *C. tenuis* und *laticauda*. Die Analader erreicht als Falte den Rand. Die Axillarfalte ist vorhanden oder fehlt. Axillarlappen und Alula normal ausgebildet.

Anmerkung. — Ueber die Notwendigkeit der Vereinigung der Gattungen *Chaetopsis* und *Stenomyia*, Loew, habe ich mich bereits in der *Wien. Ent. Zeit.* Vol. 28, p. 254 (1909) ausgesprochen. Ich habe nachgewiesen, dass bei genauerer Betrachtung kein stichhaltiger Grund zur Trennung beider Gattungen übrig bleibt, dass weder die Form der Analzelle und die Flügeladerung, Axillarfalte, noch auch der Stirnwinkel oder die Fühlerform und die Körperschlankheit ein konstantes Merkmal liefern.

Ueber die Verwandtschaft mit der Gattung *Euxesta* siehe meine Bemerkungen bei dieser Gattung.

Geographische Verbreitung der Arten. — Acht Arten aus Nord- und Süd-Amerika.

1. *C. aenea*, Wiedemann, Aussereur. zweifl. Ins. Vol. 2, p. 462 (8) (1830) Nord- und Mittel-Amerika. (*Ortalis*). — **Taf. 2, Fig. 32-36.**

aenea, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 315 (1), pl. 2, f. 21 (1867) (*Chaetopsis*); Mon. N. Amer. Dipt. Vol. 1, p. 59 (1862); Vol. 3, p. 170 (1), pl. 9, f. 19 (1873); Schiner, Novara-Dipt. p. 283 (1868) (*Amethysa*); Th. W. Fyles, The Canad. Entom. Vol. 21, p. 236 (1889) (*Chaetopsis*); Townsend, ibidem, Vol. 25, p. 12 (1893); Howard, Ins. Life, Vol. 7, p. 352 (1895); Snow, Kans. Univ. Sc. Bull. Vol 2, p. 219 (1903); Cresson, Trans. Amer. Ent. Soc. Vol. 32, p. 287 (1906).

syn. trifasciata, Say, Journ. Acad. Sc. Philad. Vol. 6, p. 184 (3) (1830); Compl. Works, Vol. 2, p. 368 (1859) (*Ortalis*).
massyla, Walker, List Dipt. Brit. Mus. Vol. 4, p. 992 (1849) (*Ortalis*); Loew, Mon. N. Amer. Dipt. Vol. 3, p. 199 (1873) (? *Euxesta*-Art); Aldrich, Cat. N. Amer. Dipt. p. 597 (1905).
fulvifrons, Macquart, Dipt. Exot. Suppl. 5, p. 125, pl. 7, f. 6 (1855) (*Urophora*); Loew, Mon. N. Amer. Dipt. Vol. 1, p. 59 (21) (1862).
aenea, V. d. Wulp, Tijdschr. v. Ent. (ser. 2), Vol. 2, p. 157, pl. 5, f. 12-14 (1867) (*Aciura*); Loew, Mon. N. Amer. Dipt. Vol. 3, p. 335 (1873).

2. *C. angusta*, Hendel, Wien. Ent. Zeit. Vol. 28, p. 260 (6) (1909). — **Taf. 2, Fig. 40.** — Brasilien.

3. *C. apicalis*, Johnson, Ent. News Philad. Vol. 11, p. 326, fig. (1900). — Nord-Amerika.
apicalis, Hendel, Wien. Ent. Zeit. Vol. 28, p. 256 (1) (1909).

4. *C. debilis*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 318 (2), pl. 2, f. 22 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 172 (2), pl. 9, f. 20 (1873). — Cuba.
? syn. trifasciata, Say, Descr. New Spec. N. Amer. Insects, found in Louisiana, New Harmony 1831, N° 19 (*Trypeta*). Vergleiche Osten-Sacken, Psyche, Vol. 8, p. 308 (1899).

5. *C. laticauda*, Hendel, Wien. Ent. Zeit. Vol. 28, p. 259 (5) (1909). — Paraguay.

6. *C. mucronata*, Hendel, ibidem, p. 256 (2) (1909). — **Taf. 2, Fig. 39.** — Brasilien.

7. *C. praeceps*, Hendel, ibidem, p. 258 (3) (1909). — **Taf. 2, Fig. 42.** — Brasilien.

8. *C. tenuis*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 230, pl. 2, f. 24 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 174, pl. 9, f. 21 (1873) (*Stenomyia*). — **Taf. 3, Fig. 87; Taf. 4, Fig. 88.** — Nord-Amerika.
tenuis, Snow, Kans. Univ. Sc. Bull. Vol. 2, p. 219 (1903); Hendel, Wien. Ent. Zeit. Vol. 28, p. 259 (4) (1909).

9. Genus HYPOECTA, Loew

Hypoecta. Loew, Berl. Ent. Zeitschr. Vol. 11, p. 318 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 173 (1873); Hendel, Wien. Ent. Zeit. Vol. 28, p. 255 (1909).

Typische Art : *H. longula*, Loew.

Charaktere. — Auf diese Gattung passt alles das, was ich über *Chaetopsis laticauda* gesagt habe, so dass ich mich im Uebrigen kurz fassen kann.

Die Stirne ist breiter als ein Drittel der Kopfbreite, oben wenig schmäler, der Länge und der Quere nach gewölbt, vor der Ozellen in der Mitte der unbeborsteten Strieme etwas konkav. Das Kopfprofil (**Taf. 2, Fig. 37**) habe ich nach der Loew'sche Type in der Kollektion Winthem gezeichnet und zeigt einen circa rechten Stirnwinkel. Der vordere Stirnrand überragt etwas die darunter liegende Lunula. Der Klypeus zeigt gar keine Querfurche, aber deutliche Rinnen unter den Fühlern, die durch einen flach erhabenen Längsrücken getrennt werden. Das Prælabrum ist wie bei *Chaetopsis laticauda* rudimentär. Das dritte Fühlerglied ist schlank zugespitzt, fast sichelförmig.

Die Mittelschenkel sind hinten wie bei den *Chaetopsis*-Arten nicht gewimpert.

Der gewichtigste Unterschied bleibt aber die Gestalt der Analzelle. Die im stumpfen Winkel gebrochene Querader schliesst nämlich diese Zelle vorne nicht ganz ab, sondern lässt sie, da sie sich nicht mit der Analader verbindet, offen. Dieses von Loew schon angegebene Merkmal wird aber in seiner Zeichnung in der *Berl. Ent. Zeitschr.* t. 2, f. 23 (1867), nicht zum Ausdrucke gebracht. Als zweites Merkmal kommt noch hinzu, dass sich die Analader nicht als Falte fortsetzt, sondern bald hinter der Zelle stumpf, wie abgebissen endet. Die Axillarfalte fehlt.

Wenn man auch, bei sonstiger Uebereinstimmung in der Organisation mit *Chaetopsis*, die von der Gestalt der Analzelle entnommenen Merkmale als generisch trennend ansehen will, so bleibt doch noch

zu bedenken, dass uns bis jetzt nur zwei Exemplare dieser Art und Gattung bekannt wurden, das Loew'sche ♀ aus Santos in Brasilien (Type in Wien) und das von Barbiellini in S. Paulo gesammelte ♂, das ich von Prof. M. Bezzi zur Ansicht erhielt. Es wäre möglich, dass wir es überhaupt nur mit einer zufälligen Bildung zu tun haben. Freilich sind alle vier Flügel beider Fliegen vollkommen gleichartig ausgebildet, was jedenfalls zu beachten ist.

Geographische Verbreitung der Art. — Eine Art aus Süd-Amerika.

1. *H. longula*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 319, t. 2, f. 23 (1867). Brasilien. — **Taf. 2, Fig. 37, 38.**
   longula, Hendel, Wien. Ent. Zeit. Vol. 28, p. 255 (1909).

10. Genus EUMETOPIELLA, Hendel

Eumetopiella, Hendel, Wien. Ent. Zeit. Vol. 26, p. 98 (1907).

Synonyma : **Eumetopia**, Macquart, Dipt. Exot. Suppl. 2, p. 87, pl. 6, f. 2 (1847); Loew, Berl. Ent. Zeitschr. Vol. 11, p. 322, pl. 2, f. 25 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 175, pl. 9, f. 22 (1873); Bigot, Ann. Soc. Ent. Fr. Vol. 6 (6), p. 292 (1886); Aldrich, Cat. N. Amer. Dipt. p. 598 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 278 u. p. 272, f. 13 (1908).

Typische Art : *E. rufipes*, Macquart.

Charaktere. — Kopf relativ gross, etwas breiter als der Thorax, durch das kegelförmige Profil besonders charakterisiert. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 4 : 7, von vorne ebenfalls wie 4 : 7. Der Kopf ist also nicht allein stark verlängert, sondern auch verbreitert. Die Stirne ist oben ein Drittel des Kopfes breit und verbreitert sich allmählich nach vorne hin. Die Augenränder sind konvex. Im Profile ist die Stirne fast wagrecht und gerade, springt ungefähr die Hälfte des wagrechten Augendurchmessers über die Augen vor und bildet an den Fühlerwurzeln mit der geraden Linie des aussergewöhnlich stark zurücktretenden Untergesichtes einen scharfen und sehr spitzen Stirnwinkel. Der hintere Teil der Stirne ist fast eben, höchstens die Strieme etwas vertieft, der vordere, vorstehende Teil aber der Quere derart gewölbt, dass er im Vereine mit dem Untergesicht im Allgemeinen einen über die Augen vorstehenden Konus bildet, an dessen Spitze die Fühler sitzen. Die Ozellen bilden ein gleichseitiges Dreieck, liegen am Scheitel zwischen den Augenecken und vor der etwas weiter hinten abfallenden Scheitelkante und auf einer nur kurzen Ozellenplatte. Die Scheitelplatten sind auch nur kurz und oben am Scheitel neben den Augenrändern mehr durch ihre Färbung abgegrenzt.

Kopfborsten : Je eine mittelstarke obere Frontorbitalborste am vorderen Ende der Scheitelplatten, nach hinten und etwas nach aussen gebogen; ein kleines, nach vorne divergierendes Ozellarpaar hinter der ersten Ozelle. Die inneren Scheitelborsten in der Verlängerung der Stirnaugenränder, die äusseren auswärts davon. Die mit den Spitzen etwas nach vorne gekrümmten Postvertikalborsten stehen schon am Hinterkopfe. Die vordere Stirne ist auf den Wangenplatten und der dazwischen liegenden Strieme kurz und zerstreut behaart. Diese Behaarung wird nur vorne an den Seiten rauher und fast borstlich.

Der Hinterkopf fällt erst in einiger Entfernung hinter dem Augeneck und den Ozellen mit abgerundeter Kante ab und ist sanft konvex.

Der Klypeus weicht im Profile wie schon gesagt fast geradlinig bis zu dem erst unter den Augen liegenden, gar nicht vortretenden und deshalb auch nicht sichtbaren Mundrand zurück. Die Backenleisten und der Unterrand des Kopfes bilden eine Fortsetzung dieser Linie. Das ganze Kopfprofil ist

daher ein spitzes Dreieck. Von unten betrachtet zeigt der Klypeus unter den Fühlern seichte, zum Mundrande hinziehende Längsrinnen, die durch eine schwach erhabene Längsleiste (Längskiel) getrennt werden. Aussen werden diese Längsfurchen durch die den Klypeus gegen den Mundrand hin verschmälernden Gesichtsleisten begrenzt, die sich dann neben der Mundöffnung mit den auch schon im Profile sichtbaren Backenleisten vereinigen. Die Stirnspalte zieht gerade von Fühlerwurzel zu Fühlerwurzel — eine Lunula ist daher nicht entwickelt — und sendet dann divergierende Aeste bis unter das Auge nach hinten.

Wangen neben den Fühlern natürlich sehr breit, nach unten hin dann an Breite rasch abnehmend. Backen schmäler als die Hälfte des lotrechten Augendurchmessers, unten horizontal, hinter den Augen deutlich konvex vortretend. Backengruben sind unter den Augen unterscheidbar.

Die kurzen Fühler sind fast wagrecht vorgestreckt, an der Spitze der kegelförmigen Stirne inseriert. Das erste Glied sehr kurz, aber deutlich sichtbar; das zweite faste die Hälfte des dritten lang, oben beborstet; das dritte Glied im Allgemeinen oval, ein und einhalbmal so lang wie breit, oben an der Spitze mit einem winkeligen oder bogigen Ausschnitt (**Taf. 2, Fig. 50b**). Arista basal, nackt, allmählich dünner werdend. Im Profile stehen die Fühler der Augenmitte gegenüber.

Die im Leben ungezeichneten Augen sind wagrecht-oval. Unter den Fühlern bilden die Augenränder einen stark abgerundeten Winkel.

Mundöffnung klein, nach hinten gerückt Rüssel und Taster kurz, klein und schwach, letztere wenig verbreitert. Prælabrum nur von unten bemerkbar, ebenfalls klein und schmal.

Thorax schlank und langgestreckt. Der Rücken ist nur zwei Drittel seiner Länge breit, im Umrisse abgerundet, oben wenig gewölbt. Quernahtäste sehr schief ungefähr in den Seitenmitten liegend. Mesopleuren und Sternopleuren langgestreckt, erstere in einer deutlichen Diagonalkante gekrümmt. Schildchen klein und kurz, nur ein Fünftel des Rückens lang, eiförmig, oben nackt und flach, am Rande mit vier schiefen Borsten besetzt, wovon diejenigen an der Spitze konvergieren.

Beborstung : Der Rücken ist sehr kurz und so spärlich behaart, dass er ausser je einer Reihe von Härchen in der Linie der Dorsozentralborsten nackt erscheint. Humerale eine, Notopleurale zwei, Supraalare drei, Dorsozentrale nur ein Paar ganz hinten. Præscutellare fehlen.

Eine Mesopleurale und eine Borste oben hinten an den Sternopleuren. Prothorakale fehlt.

Beine lang und schlank, sehr spärlich behaart und eigentlich borstenlos. Mittelschienen innen mit einem starken Dorn. Füsse relativ lang. Klauen und Pulvillen normal.

Hinterleib (♀) lang und schmal, fast streifenförmig, mit sechs sichtbaren Segmenten, die vorderen ziemlich gleichlang, das sechste aber viel schmäler. Das erste Glied des Ovipositors ist fast so breit wie der Hinterleib, langgestreckt, ein und einhalbmal so lang wie breit, an den Seiten konvex begrenzt, am spitzen Ende abgestutzt, oben hohl. Behaarung kurz und spärlich.

Flügel lang und schmal, an der Spitze verwaschen braun. Die Kosta gerade. Die nackte Subkosta biegt sich zur Kosta auf und mündet vor der Mitte des Flügels, in geringer Entfernung hinter der Mediastina. Randmal daher nur kurz und schmal. Radialis sehr sanft geschwungen, fast gerade wie die übrigen Längsadern. Die erste Hinterrandzelle verengt sich nur sehr wenig gegen die Flügelspitze zu. Beide Queradern sind gerade und beinahe senkrecht, die kleine steht vor der Mitte des Flügels. Die grosse Analzelle ist vorne durch eine gerade Querader geschlossen und hat daher unten nur einen spitzen Winkel und keinen abgeschnürten spitzen Zipfel. Die Analader erreicht als Falte den Rand nicht vollständig, die Axillarfalte ist schwach ausgebildet. Schulterlappen und Alula normal entwickelt.

Geographische Verbreitung der Arten. — Zwei Arten aus Nord- und Mittel-Amerika.

1. *E. rufipes*, Macquart, Dipt. Exot. Suppl. 2, p. 88, t. 6, f. 2 (1847) (*Eumetopia*). — **Taf. 2, Fig. 49, 50a, 50b, 51.** Nord-Amerika, Mexico.

syn. rufipes, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 322, t. 2, f. 25 (1867); Mon.

N. Amer. Dipt. Vol. 3, p. 175, t. 9, f. 22 (1873) (*Eumetopia*); Snow, Univ. Kans. Sc. Bull. Vol. 2, p. 219 (1903).

2. *E. varipes*, Loew, Dipt. Amer. Sept. indig. Cent. 6, N° 87, p. 55 (1865) (*Eumetopia*); Berl. Ent. Zeitschr. Vol. 11, p. 323, t. 2, f. 26 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 176, t. 9, f. 23 (1873). Cuba.

11. Genus EUMECOSOMYIA, nov. gen.

Typische Art : *E. gracilis*, Coquillett.

Charaktere. — Kopf von normaler Grösse, aber breiter als der schmale Thorax. Beim Typus verhält sich der lotrechte Kopfdurchmesser zum wagrechten im Profile wie 9 : 7, von vorne wie 9 : 13. Die Stirne ist vorne an der breitesten Stelle etwas breiter als ein Drittel des Kopfes und verschmälert sich am Scheitel merklich. Die begrenzenden Augenränder sind etwas konkav. Im Profile ist die Stirne von mittlerer Neigung, wenig gekrümmt, tritt nur um Weniges über die Augen vor und bildet an den Fühlerwurzeln mit der zurückweichenden Geraden des Klypeus einen deutlichen, stumpfen Gesichtswinkel. Die Wangen sind so nicht sichtbar. Der Quere nach ist die Stirnfläche eben. Ozellendreieck und Scheitelplatten sind gut ausgebildet, schmal, oben etwas zusammengedrängt und reichen fast bis zur Stirnmitte vor. Die Scheitelplatten liegen eng neben dem Augenrande. Die Ozellen sind von der Scheitelkante etwas weggerückt und bilden im oberen Stirndrittel ein langgestrecktes Dreieck.

Kopfborsten : Je eine starke obere, nach hinten gebogene Frontorbitalborste an der Spitze der Scheitelplatten. Die aussergewöhnlich grossen und starken Ozellarborsten sind hinter der vordersten Ozelle inseriert, divergieren nach vorne und sind stark herabgebogen. Das starke innere Scheitelborstenpaar steht in der Verlängerung der Stirnaugenränder und divergiert schwach mit den Spitzen. Das andere Vertikalpaar wie gewöhnlich. Das Postvertikalpaar schwach, nach hinten geneigt. In der unteren Stirnhälfte befinden sich am Augenrande auf den Wangenplatten jederseits eine Reihe mittelstarker, gekreuzter unterer Frontorbitalborsten, auf der Strieme innerhalb dieser Borsten nur ganz vorne ein Pärchen.

Der Hinterkopf ist hinter der scharfen Scheitelkante oben nur sehr wenig für den Thorax ausgehöhlt, unten flach. Hintere Augenränder schmal.

Der Klypeus weicht im Profile gleich unter den Fühler geradlinig zurück, während er dann unter der Querfurche in der Mitte wieder als Epistom vortritt. Von vorne besehen ist der obere Teil ziemlich eben, das Epistom der Quere nach stark gewölbt. Vertiefungen für die Fühler sind nicht zu sehen. Der Klypeus ist oben schon fast so breit wie die Stirne und wird nach unten hin etwas breiter.

Die Stirnspalte zieht in einem Kreisbogen über die Fühler hinweg und erzeugt dadurch eine deutliche Lunula. Die Spaltenschenkel divergieren nach unten hin mässig und verlaufen in nur geringen Entfernungen neben den Facialien und den Augenrändern. Erstere bilden gleich unter der Querfurche mit den nach unten hin stärker divergierenden, bewimperten Peristomalien einen ziemlich deutlichen Winkel.

Die Wangen sind nur sehr schmal, die Backen auch nur circa ein Fünftel des lotrechten Augendurchmessers breit, unten wagrecht und treten hinter dem schiefen hinteren Augenrand merklich hervor. Unter dem Auge bilden die scharf abgesetzten nackten und auch anders gefärbten Backengruben den grössten Teil der Backen.

Die mittellangen Fühler sind geneigt, ungefähr in den Stirndritteln inseriert. Die zwei Basalglieder sind wie gewöhnlich kurz, das zweite ist oben mit einer Borste versehen. Das dritte Glied ist beiläufig ein und einhalbmal so lang wie breit, am Oberrande mässig konkav und vorne mit einer

deutlichen Spitze versehen. Die basale Arista ist nackt, wurzelwärts etwas stärker. Im Profile sind die Fühler der Augenmitte gegenüber angewachsen.

Die im Leben ungezeichneten Augen liegen etwas schief und haben einen länglich ovalen Umriss. Neben den Fühlern bilden die Augenränder einen deutlichen stumpfen Winkel.

Mundöffnung mittelgross, ebenso der Rüssel. Taster etwas verbreitert, unten borstig. Prælabrum nur niedrig und wenig vortretend.

Thorax schlank. Der Rücken ist um ein Ziemliches schmäler als lang, eckig, wenig gewölbt. Quernahtäste vor den Seitenmitten. Mesopleuren in einer deutlichen Diagonalkante gekrümmt, langgestreckt. Das Schildchen ist etwas kürzer als ein Drittel des Rückens, eiförmig zugespitzt, oben abgeflacht und nackt, durch eine seichte Grube vom Rücken getrennt und nicht über dessen Fläche emporgerichtet.

Beborstung : Grundbehaarung des Rückens kurz, deutlich in Längsreihen geordnet. Humerale eine, Notopleurale zwei, Supraalare drei; nur ein Paar Dorsozentralborsten hinten. Præscutellare keine. Die Börstchenreihen in der Linie der Dorsozentralen fallen durch ihre Stärke auf. Vier schief stehende Schildchenborsten, wovon die an der Spitze divergieren.

Pleuren : Meso- und Sternopleuren behaart. An der Naht nur eine stärkere Mesopleuralborste. Eine Sternopleurale. Prothorakale schwach.

Beine schlank, spärlich beborstet. Vorderhüften mittellang, nur unten beborstet. Vorderschenkel nur posterodorsal mit zwei Borstenreihen, posteroventral fehlen dieselben. Mittelschenkel vorne mit einigen kurzen, abstehenden Börstchen in einer Reihe, hinten nicht gewimpert. Auch die Börstchen vor der Hinterschenkel scheinen zu fehlen. Mittelschienen innen mit einem langen Endsporn. Füsse relativ lang. Klauen und Pulvillen normal.

Hinterleib (♀) schmal, langgestreckt, so lang und in der Mitte so breit wie der Thorax, mit sechs sichtbaren Segmenten. Die vorderen davon ziemlich gleichlang, das sechste nur als schmaler Streifen vor dem Ovipositor sichtbar. Das erste Glied desselben ist so breit wie der Hinterleib und so breit wie lang, am Ende stumpf abgeschnitten und an den Seiten konvex; oben ausgehöhlt. Beborstung kurz, unauffällig.

Die braun verwaschenen Flügel verschmälern sich gegen die Wurzel zu. Der Hinterrand hat überall die gleiche Krümmung, ein Achsellappen springt nicht vor. Die Kosta ist ziemlich gerade, die nackte Subkosta mündet vor der Flügelmitte, zu erterer aufgebogen und bildet mit der Mediastina eine kurze und kleine Subkostalzelle. Radialis sehr sanft wellig geschwungen. Die übrigen Längsadern fast gerade. Erste Hinterrandzelle an der Mündung nur wenig verengt. Die fast senkrechte kleine Querader steht wenig hinter der Flügelmitte, deutlich aber hinter jener der Discoïdalzelle. Hintere Querader gerade und ebenfalls fast senkrecht. Die Analzelle bildet das charakteristischeste Merkmal der Gattung. Sie ist wie die Basalzelle sehr klein und aussen ganz abgerundet, bauchig begrentz. Die Analader fehlt vollständig. Flügellappen ausgebildet. Schüppchen normal.

Anmerkung. — Die abgerundete Analzelle — ein Unicum bei den Ulidiinen — veranlasste Herrn Coquillett, diese Tiere zu den Richardiinen zu stellen und vorläufig bei der Gattung *Epiplatea*, Loew, unterzubringen. Die Fliegen sind aber durch ihre ganze Organisation — Kopfbildung, Beborstung, Flügelgeäder — so unzweifelhafte Verwandte von *Chaetopsis*, *Euxesta*, *Paraphyola* u. s. w., dass ihre Zugehörigkeit zu den Ulidiinen ausser jedem Zweifel steht. Mit der Gattung *Epiplatea*, die Loew auch anfangs den Ulidiinen zurechnete, die aber eine sichere Richardiine ist, hat *Eumecosomyia* keine nähere Verwandtschaft.

Unsere Gattung lässt sich an der abgerundeten Analzelle und dem Fehlen der Analader leicht von allen anderen Ulidiinen unterscheiden.

Geographische Verbreitung der Arten. — Zwei Arten aus Mittel- und Süd-Amerika.

1. *E. gracilis*, Coquillett, Journ. New York Ent. Soc. Vol. 8, p. 25 (*Epiplatea*) (1900). — **Taf. 4, Fig. 97, 98.** Mexico, Cuba, Brasilien, Paraguay.
   gracilis, Hendel, Wien. Ent. Zeit. Vol. 28, p. 269 (1909).
2. *E. lacteivittata*, Hendel, Wien. Ent. Zeit. Vol. 28, p. 270 (1909). Mexico.

12. Genus STENERETMA, Loew

Steneretma. Loew, Monogr. Dipt. N. Amer. Vol. 3, p. 186 (8) (1873); Aldrich, Cat. N. Amer. Dipt. p. 598 1) (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 279 (1908).

Typische Art : *S. laticauda*, Loew.

Originalbeschreibung. — « Front very broad, not attenuated anteriorly; occiput very convex; cheeks broad; ocelli small and rather approximate to each other 2). Arista thin and bare. A strong mesothoracic bristle (= sternopleural bristle, sens. nob.); no prothoracic one. Scutellum with two bristles 2); metathorax sloping. Abdomen slender and elongate, attenuated towards the basis. Femora of medium strenght, all unarmed. Wings but little developed, short and exceedingly narrow, attenuate in the shape of a wedge towards the basis, so that their surface beyond the fifth longitudinal vein is nothing but a narrow, veinless strip; the auxiliary vein so closely approximated to the first longitudinal vein, that they can be distinctly told apart at their end only; the two ordinary crossveins approximate to each other; the small one lies but little beyond the middle of the wing; second basal cell very small and narrow; the anal cell and the sixth longitudinal vein are wanting, with the exception of a rudiment of the latter, which does not reach beyond the axillary incision. »

Loew kannte nur das ♀, ich habe nur das ♂ vor mir.

Charaktere. — Kopf bei weitem breiter als der abnorm schmale Thorax. Im Profile verhält sich der lotrechte Kopfdurchmesser zum wagrechten wie 8 : 7, von vorne wie 9 : 11. Die parallelrandige Stirne ist fast die halbe Kopfbreite breit, der Länge nach wenig, der Quere nach stärker gewölbt; im Profile tritt sie bei mittlerer Neigung ein ziemliches Stück vor die Augen vor, um an den Fühlerwurzeln mit dem oben zurückweichenden Klypeus einen fast rechten, gut bemerkbaren Stirnwinkel zu bilden. Ozellenplatte und Scheitelplatten sind als schmale, schlanke Dreiecke differenziert und reichen mit ihren Spitzen ungefähr bis zum oberen Stirndrittel herab. Letztere konvergieren mit den Spitzen, die vom Augenrande wegrücken, etwas. Die Ozellen bilden ein langes, gleichschenkeliges Dreieck; die vordere Ozelle ist von den zwei oberen den doppelten Abstand derselben entfernt.

Kopfborsten : obere Frontorbitalborsten auf den Scheitelplatten jederseits zwei, nach hinten gebogene, eine obere stärkere und eine untere, mehr einwärts gerückte, schwächere. Zwei relativ starke, nach vorne und aussen divergierende Ozellarborsten, in der Mitte zwischen der vorderen und den hinteren Ozellen inseriert. An der stark abgerundeten, konvexen Scheitelkante stehen in der Verlängerung der Stirnaugenränder zwei aufgerichtete innere und daneben zwei stark nach aussen gebogene äussere Vertikalborsten. Im Ozellenabstande hinter den Punktaugen zwei starke, nach hinten geneigte Postvertikale. Die Stirnstrieme trägt in einiger Entfernung von den Augenrändern jederseits eine Reihe von circa vier nach einwärts gebogenen Börstchen und innerhalb derselben auf der Stirnmitte noch zwei bis drei Paar gleichstarker Kreuzbörstchen. Vorne ist die Stirnstrieme ausgeschnitten und lässt über den Fühlern eine deutliche Lunula frei.

1) Druckfehler : für *S. latiuscula* lies *S. laticauda*.
2) Stimmt nicht mit meiner Beobachtung.

Der Klypeus hat über der Mitte eine Querfurche, ist also im Profile konkav. In der Mitte ist er so breit wie die Stirne, nach unten hin wird er breiter. Die Facialien und die gleich daneben verlaufenden Spaltenäste sind gerade und divergieren ziemlich nach unten hin. Das vortretende Epistom ist der Quere nach stärker gewölbt. Die bewimperten Peristomalien sind nur von der Seite sichtbar. Die Wangen sind schmal, aber deutlich sichtbar, die Backen ungefähr ein Viertel des lotrechten Augendurchmessers hoch, aber nur kurz. Der Hinterkopf tritt merklich hinter den Augen hervor, *auch oben*, selbst unten nicht stärker, und ist mit schwacher, gleichmässiger Wölbung konvex. Augen länglich oval, etwas schief liegend. Der Winkel der Ränder eines Auges neben den Fühlern ist ein abgerundet stumpfer.

Fühler stark geneigt, etwas kürzer als das Untergesicht. Erstes Glied sehr kurz, zweites etwas kürzer als die Hälfte des dritten, oben mit einer abstehenden Borste versehen, drittes länglich oval, oben kaum merklich konkav, zweimal so lang wie breit, mit basaler, nackter Arista. Der Abstand der Fühlerwurzeln von einander beträgt ein Drittel der dortigen Stirnbreite. Im Profile sitzen die Fühler schon unter der Augenmitte.

Rüssel relativ klein. Taster stark verbreitert, beborstet. Prælabrum mittelgross, deutlich vorstehend.

Thorax im Verhältnisse zum Kopfe ausserordentlich schmal und niedrig. Er ist so lang wie der Kopf breit, oder nur doppelt so lang wie der Kopf von oben gesehen oder doppelt so lang wie selbst breit (ohne Scutellum) und hoch. Der Rücken ist überall ziemlich gleichbreit, von mässiger Wölbung. Die Quernahtäste liegen vor der Mitte und sind nur kurz. Die Pleuren haben eine auffallende Diagonalkante und sind unter und vor derselben stark eingedrückt, konkav. Das eiförmige Schildchen ist kaum ein Viertel des Rückens lang und oben flach. Der Metathorax ist nur sehr wenig steil.

Beborstung : Grundbehaarung des Rückens kurz, in Längsreihen geordnet. Humerale eine, Notopleurale zwei, Supraalare drei, Dorsozentrale ein Paar hinten (oder zwei?). Scutellare vier, zwei Paare. Prothorakale keine, Mesopleurale eine, Sternopleurale eine starke Borste.

Beine relativ kurz, von mittlerer Stärke. Die Entfernung zwischen den Vorder- und Mittelhüften ist eine auffallend grosse. Die starken Vorderhüften scheinen « beweglich » zu sein. Die Mittelbeine sind die längsten. Ausser dem Endsporne der Mittelschienen sieht man keine Borste. Die Füsse der hinteren zwei Beinpaare sind lang, die Klauen und Pulvillen relativ gross.

Hinterleib (♂) von keulenförmigem Umriss, an der Wurzel allmählich zu einem deutlichen Petiolus verjüngt, merklich länger und auch breiter und voluminöser als der Thorax, mit fünf sichtbaren Segmenten, mit Ausnahme des basalen Doppelsegmentes von ziemlich gleicher, beträchtlicher Länge. Längere Borsten oder Haare am zweiten Tergite fehlen vollständig. Hypopyg klein, versteckt. Die Ränder der Tergite sind sehr breit auf die Bauchseite herumgeschlagen. Die ganze Behaarung des Abdomens ist nur kurz, anliegend. « The ovipositor is of the same color as the remainder of the body and is strikingly broad; its first joint is about as long as the last three abdominal segments taken together; from its basis to the middle it is exactly as broad as the abdomen itself; beyond the middle it is but little attenuate, so that the truncature at the end has a considerable breadth; the second and third joints of the ovipositor are also rather broad; the latter does not end in a sharp point, but in a narrow truncature. »

Flügel halb verkümmert, kaum noch zum Fliegen geeignet, nur so lang wie der Thorax und sehr schmal. Umriss keulenförmig, Basis verschmälert. Stark verkürzt ist der hintere Saum des Flügels, der knapp unter der Posticalis verläuft. Analzelle und Analader fehlen vollends. Die Kosta ist weder an der Mündung der Mediastina, noch sonst wo unterbrochen, wie es bei Richardiinen der Fall ist. Die nackte Subkosta mündet weit vor der Flügelmitte und in sehr geringer Entfernung vor ihr, schwer von ihr unterscheidbar, die Mediastina. Die im Allgemeinen ziemlich gerade Radialis zeigt über der kleinen Querader einen stumpfen Winkel. Die erste Hinterrandzelle ist an der Spitze merklich verengt. Die

beiden Queradern stehen senkrecht und sind einander sehr genähert. Die kleine steht in der Flügelmitte und ihr Abstand von der hinteren ist ungefähr ein Viertel des letzten Diskoïdaladerabschnittes und ein Fünftel der Diskoïdalzelle lang. Axillarlappen und Alula fehlen. Hintere Basalzelle nur sehr klein.

Anmerkung. — Loew hat diese Gattung wegen der rudimentären Analzelle zu den Richardiinen gestellt, mit welchen sie auch den gestielten Hinterleib gemeinsam hat. Aehnlich reduzierte Basalzellen zeigt aber auch schon mein Genus *Eumecosomyia*, die ohne Zweifel eine echte Ulidiine ist, und dem Stiele des Hinterleibes von *Steneretma* fehlen ausserdem die für die Richardiinen charakteristischen Borsten des zweiten Abdominaltergits. Da auch die Kosta bei der Mediastinamündung nicht unterbrochen ist, die Vorderstirne Ulidiinenartige Beborstung trägt — in starkem Gegensatze zu den Richardiinen — so bringe ich die Loew'sche Gattung lieber hieher.

Geographische Verbreitung der Art. — Eine Art aus Nord-Amerika.

1. *S. laticauda*, Loew, Mon. N. Amer. Dipt. Vol. 3, p. 187 (1) (1873). — Nord-Amerika.

Taf 4, Fig. 105-107.

laticauda, Aldrich, Cat. N. Amer. Dipt. p. 598 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 279 (1908).

13. Genus AXIOLOGINA, nov. gen.

Typische Art : *A. ferrum-equinum*, Hendel.

Charaktere. — Kopf von gewöhnlicher Grösse, ungefähr so breit wie der Thorax, langstirnig. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 3 : 2, von vorne wie 4 : 5. Die geradlinig begrenzte Stirne ist schmäler als ein Drittel des Kopfes und fast parallelrandig, kaum etwas nach vorne hin verschmälert. Sie ist der Länge und Quere nach flach eben und gerade, fällt im Profile steil nach vorne ab und bildet mit dem Untergesicht einen wenig sichtbaren, sehr stumpfen Gesichtswinkel. Auch über die Augen tritt sie kaum hervor; Wangen daher unsichtbar. Ganz oben am Augenrande sind kurze Scheitelplatten und ein kleines Ozellendreieck sichtbar. Die Ozellen liegen eng beisammen, in der Höhe des hinteren Augenrandes, und bilden ein gleichseitiges Dreieck.

Kopfborsten : Zwei obere Frontorbitalborsten von mittlerer Grösse und wenig auffallend auf den Scheitelplatten, nach hinten und auswärts gebogen. Ozellarborsten klein, hinter der ersten Ozelle inseriert, nach vorne und aussen gerichtet. Innere Vertikalborsten konvergierend und etwas nach einwärts gerückt, äussere divergierend und schon ausserhalb der Verlängerung der Stirnaugenränder. Postvertikale nach hinten geneigt. Vor den zwei Frontorbitalborsten steht jederseits eine Reihe gleichfalls nach aussen gebogener, nach vorne immer kürzer werdender Börstchen unmittelbar neben dem Augenrande. Aber auch die Stirnstrieme dazwischen ist mit nach einwärts und vorne gerichteten Börstchen besetzt.

Der Hinterkopf fällt erst knapp hinter den Vertikal- und etwas vor den Postvertikalborsten ab. Es bleibt also zwischen den Ozellen und der Kante ein etwas grösserer, gewölbter Zwischenraum. Hinterkopf oben nur mässig konkav.

Der Klypeus zeigt im Profile eine konkave Linie; der Mundrand tritt kaum etwas mehr als die Fühlerwurzeln vor. Von vorne betrachtet verbreitert sich der Klypeus allmählich nach unten und zeigt in der Mitte eine deutliche Querfurche. Vertiefungen für die Fühler sind kaum angedeutet,

Die Stirnspalte zieht in einem steilen Bogen über die Fühlerwurzeln herum und bildet eine verhältnismässig grosse Lunula, ohne Querkante. Die Spaltenäste divergieren nach unten hin stark und bleiben in geringer Entfernung neben den Augenrändern und neben den Facialien. Die also gleichfalls divergierenden Gesichtsleisten gehen in der Nähe des Mundrandes in einem Bogen in die Peristo-

malien über. Letztere sind kurz beborstet. Die Backengruben sind scharf differenziert und nehmen den ganzen Raum zwischen den Augen und den Peristomalien ein.

Die Wangen sind nur schmal, die Backen auch nur ein Sechstel des lotrechten Augendurchmessers breit, hinten weder herabgesenkt, noch vorgequollen.

Die hängenden Fühler sind wohl nicht lang, bei dem kurzen Untergesicht aber so lang wie dasselbe (ohne Prælabrum). Erstes Glied kaum sichtbar, zweites kurz, oben mit einer abstehenden Borste versehen, drittes länglich oval, ungefähr zweimal so lang wie breit, mit abgerundeter Spitze. An der Wurzel stehen die Fühler ungefähr in den Stirndritteln, im Profile merklich unter der Mitte der Augen. Die Arista ist nackt, etwas an der Wurzel verdickt und steht basal.

Die ungezeichneten Augen sind lotrecht oval. Der Winkel der Augenränder neben den Fühlerwurzeln ist im Scheitel etwas abgerundet, aber deutlich stumpf.

Mundöffnung relativ gross. Rüssel dick und plump, Kinn hornig, Taster stark verbreitert, unten beborstet. Prælabrum stark vortretend, sehr gross, hoch und breit.

Thorax gedrungen. Rücken quadratisch, oben stark gewölbt. Quernahtäste vor den Seitenmitten. Pleuren diagonal stärker gewölbt, ohne deutliche Kante. Sternopleuren kurz. Schildchen von halbkreisförmigem Umrisse, ein Viertel des Rückens lang, stark gewölbt, nackt, durch eine scharfe Querrinne vom Rücken abgesetzt.

Beborstung : Grundbehaarung des Rückens kurz, ziemlich in Längsreihen geordnet. Humerale eine, Notopleurale zwei, Supraalare drei, zwei Paare Dorsozentralborsten hinten, keine Præscutellare. Vier schiefstehende, fast gleichlaufende Schildchenborsten.

Meso- und Sternopleuren behaart. Eine starke Mesopleuralborste unter schwächeren neben der Naht, eine Sternopleurale oben, hinten. Prothorakale schwach, aber deutlich.

Beine von mittlerer Länge und Stärke. Vorderhüften nur ganz unten beborstet. Vorderschenkel posterodorsal mit zwei Borstenreihen, posteroventral mit einer Reihe sehr starker Borsten in der Spitzenhälfte. Mittelschenkel vorne in der Mitte mit kurzen abstehenden Börstchen besetzt, posterior der ganzen Länge nach lang gewimpert. Hinterschenkel oben vor der Spitze mit einem Börstchen, Mittelschienen mit einem langen Endsporn. Klauen und Pulvillen normal.

Hinterleib breit eiförmig, mit fünf ziemlich gleichlangen Segmenten, kurzhaarig. Hypopyg klein. Erstes Glied des Ovipositors hat hervorgestreckt eine herzförmige Gestalt, ist wenig breiter als lang und an der Spitze breit abgestutzt. Auf der Oberseite hat es eine erhabene T-förmige Leiste. Zurückgezogen ist vom Basalgliede nur der hinter dem Querstriche des T der Leiste liegende Teil zu sehen. Dieser ist doppelt so breit wie lang, breit trapezförmig und sieht wie ein dem fünften folgendes sechstes Segment aus.

Der Hinterleib zeigt hinter dem zweiten Tergit eine Querfurche. Der Vorderrand des dritten Tergits ist namentlich an den Seiten mit Hohlpunkten versehen.

Am Flügel fällt in der Mitte ein schwarzes Hufeisen auf. Die Subkosta mündet in der Flügelmitte, ist vor ihrer Mündung etwas in die Subkostalzelle hineingedrückt und kurzgeschoren pubeszent. Subkostalzelle schmal. Die Radialis läuft vor ihrer Mündung eine Strecke ganz nahe neben der Kosta parallel mit derselben. Erste Hinterrandzelle drei Viertel des ganzen Flügels lang, an der Mündung verengt. Die kleine Querader steht im Wurzeldrittel des Flügels, über dem ersten Sechstel der Discoïdalzelle. Die fast gerade hintere Querader ist so schief gestellt, dass der untere Winkel der Discoïdalzelle ein ziemlich spitzer ist. Die Analzelle ist in einen spitzen Zipfel ausgezogen, der nur etwas kürzer als der restliche Teil der Analader ist. Diese Ader erreicht nur als Falte den Rand. Axillarfalte sichtbar, Schulterlappen, Alula und Schüppchen normal.

Anmerkung. — Die Gattung *Axiologina* ist von allen anderen Gattungen durch die Stellung der kleinen Querader, nahe der Flügelwurzel leicht zu unterscheiden. Eigentümlich ist auch die Bildung des Ovipositors.

Geographische Verbreitung der Art. — Eine Art aus Süd-Amerika.

1. *A. ferrum-equinum*, Hendel, Wien. Ent. Zeit. Vol. 28, p. 268 (1909) — Basilien, Peru. Taf. 3, Fig. 76-79.

14. Genus POLYTELOPTERA, nov. gen.

Typische Art : *P. apotropa,* Hendel.

Charaktere. — Kopf noch von gewöhnlicher Grösse, nur etwas breiter als der Thorax. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 10 : 7, von vorne wie 12 : 13. Die Stirne ist an ihrer breitesten Stelle über ein Drittel des Kopfes breit und verengt sich gegen den Scheitel hin fast bis auf die Hälfte dieser Breite. Die Augenränder sind schwach konkav. Im Profile fällt sie in ziemlich steiler Krümmung ab, tritt nur wenig über die Augen vor und bildet mit der zurücktretenden Klypeuslinie an den Fühlerwurzeln einen stark abgerundeten, stumpfen Stirnwinkel. Wangen nicht sichtbar. Die Stirnfläche ist der Quere nach fast eben, etwas konkav. Ozellendreieck und Scheitelplatten gut differenziert, vor der Stirnmitte endend, schmal und spitzig, letztere an den Augenrand gerückt. Die Ozellen sind ihren Längenabstand von der Scheitelkante entfernt und bilden ein etwas gestrecktes Dreieck.

Kopfborsten : Je eine starke, nach hinten gebogene obere Frontorbitalborste an der Spitze der Scheitelplatten und ein gleichgerichtetes Börstchen unmittelbar davor. Die grossen und starken Ozellarborsten stehen hinter der ersten Ozelle und sind divergierend nach vorne herabgebogen. Das lange, starke innere Vertikalpaar steht in der Verlängerung der Stirnaugenränder und divergiert schwach mit den Spitzen. Das äussere Paar ist nur schwach entwickelt. Das mittelstarke Postvertikalpaar ist nach hinten geneigt und steht an der Scheitelkante. An der unteren Stirnhälfte befinden sich auf schmalen Wangenplatten neben den Augen jederseits eine Reihe gekreutzter unterer Frontorbitalborsten und ausserdem innerhalb derselben auf der Strieme einige gekreuzte Borstenpärchen.

Der Hinterkopf ist hinter der scharfen Scheitelkante stark für den Thorax ausgehöhlt, konkav. Hintere Augenränder linear. Unterer Hinterkopf flach.

Der Klypeus weicht im Profile bis zur Mitte geradlinig zurück und tritt dann, stumpfwinkelig gebrochen, wieder gerade hervor. Von vorne betrachtet ist der obere Klypeusteil, mit Ausnahme eines sehr schwachen Mittellängskieles, fast eben, der unter der Querfurche in der Mitte gelegene Teil der Quere nach gewölbt, wenig über und unter die Gesichts- und Backenleiste vortretend. Keine Vertiefungen für die Fühler. Der Klypeus is oben fast schon so breit wie die Stirne und wird nach unten hin allmählich breiter.

Die Stirnspalte zieht in einem starkgekrümmten Bogen ziemlich hoch über die Fühlerwurzeln weg und erzeugt dadurch eine relativ grosse Lunula. Die Spaltenschenkel divergieren mässig nach unten, knapp neben den gleichlaufenden Facialien, welche sich, nicht weit vom Mundrande entfernt, mit den nur ein kurzes Stück von unten aufsteigenden, beborsteten Peristomalien in einem abgerundeten Winkel vereinigen. Im Profile liegen die Backenleisten fast wagrecht und steigen nur mässig nach vorne hin auf.

Die Wangen sind nur sehr schmal, die Backen kaum ein Viertel des lotrechten Augendurchmessers breit. Letztere treten nur wenig hinter dem Augenrande hervor und sind hinten nicht herabgesenkt. Backengruben unter dem Auge durch Form und Farbe scharf abgegrenzt.

Die Fühler sind geneigt, mittellang und stehen ungefähr in den Stirndritteln. Erstes Glied sehr kurz, zweites normal, oben mit einer Borste. Das dritte Glied ist zweimal so lang wie breit, oben vor der Spitze konkav ausgeschnitten, am Unterrande stark konvex, wodurch eine nach oben gerichtete

fast klauenartige Spitze entsteht. Arista basal, nackt, gegen die Wurzel hin etwas verdickt. Im Profile sitzen die Fühler merklich unter der Augenmitte.

Die Augen sind im Leben ungezeichnet, etwas schief, fast lotrecht oval. Neben den Fühlern bilden die Augenränder einen sehr stumpfen abgerundeten Winkel.

Mundöffnung und Rüssel von mittlerer Grösse. Taster verbreitert, unten stark beborstet. Prælabrum deutlich vortretend, mittelgross.

Thorax von mittlerer Stärke. Rücken etwas länger als breit, eckig, ziemlich gewölbt. Quernahtäste vor den Seitenmitten. Mesopleuren mit einer deutlichen Diagonalkante gekrümmt. Sternopleuren etwas in die Länge gezogen. Schildchen kurz, eiförmig zugespitzt, nur ein Viertel des Rückens lang, etwas emporgerichtet und nicht in der Rückenfläche gelegen, oben abgeflacht, eben. Querrinne vor demselben scharf.

Beborstung : Grundbehaarung des Rückens kurz, unregelmässig in Längsreihen geordnet. Humerale eine, Notopleurale zwei, Supraalare drei, zwei Paare Dorsozentrale hinten, vom rudimentären Præscutellarpaar weg nach vorne gerückt Vier schiefstehende, fast parallele Schildchenborsten.

Pleuren : Meso- und Sternopleuren behaart. Eine starke Mesopleurale oben neben schwächeren Börstchen. Eine Sternopleurale oben hinten. Prothorakale deutlich sichtbar, aber schwach.

Beine kräftig, von gewöhnlicher Länge. Besonders fallen die ganz geraden Schienen auf. Vorderhüften kurz, nur ganz unten beborstet. Hinterhüften aussen mit zwei Borsten. Vorderschenkel mit zwei Reihen mittelstarker Borsten posterodorsal. Die posteroventrale Reihe fehlt. Mittelschenkel vorne in der Mitte der Länge nach mit abstehenden Börstchen besetzt. Hinterschenkel mit den gewöhnlichen Börstchen oben vor der Spitze. Mittelschienen innen mit einem langen Endsporn. Füsse lang und stark. Klauen und Pulvillen normal.

Hinterleib eiförmig zugespitzt, wenig länger als der Thorax, kurzhaarig, mit fünf sichtbaren Segmenten von ungefähr gleicher Länge. Nur das fünfte Tergit des ♂ ist etwas verlängert. Das Hypopyg ist klein und kugelig. Das erste Glied des Ovipositors ist wenig breiter als lang, trapezförmig, mit schwach konvexen Seiten, an der Basis so breit wie der Hinterleib.

Flügel gross, von keuligem Umrisse; vor der Spitze am breitesten, gegen die Basis hin verschmälert, schwarzbraun mit hellen Querbinden. Die Kosta ist nur bis zur Mitte fast gerade, dann stark gebogen. Die nackte Subkosta mündet vor der Flügelmitte, allmählich schwach zur Kosta aufbiegend. Etwas vor ihr liegt die Mediastina Subkostalzelle daher nur klein und kurz. Kostalzelle aber relativ breit. Radialis und letzter Abschnitt der Cubitalis nach oben ausgebaucht, mit dem Ende nach unten gebogen. Erste Hinterrandzelle an der Spitze verjüngt. Discoïdalis gerade, mehr als gewöhnlich von der Cubitalis entfernt, die kleine Querader daher sehr lang. Dieselbe steht schief, weit jenseits der Mitte der Discoïdalzelle und der Flügelmitte. Die gerade hintere Querader steht senkrecht auf der Discoïdalis und ist der Flügelspitze so genähert, dass der letzte Abschnitt der vierten Längsader kürzer als der vorletzte ist. Die Analzelle ist klein, vorne durch eine scharfwinkelig gebrochene Querader abgeschlossen und unten in eine kurze Spitze ausgezogen. Die Analader biegt sich vom Flügelrande weg und erreicht nicht einmal als Falte denselben. Axillarfalte schwach. Schulterlappen schmal. Alula und Thoraxschüppchen normal.

Anmerkung. — *Polytelopiera* ist die einzige Gattung, bei welcher der letzte Abschnitt der Discoïdalader kürzer als der vorletzte ist. Hiezu kommt noch als Erkennungszeichen der keulige Umriss des Flügels und nebst dem fast krallenartig zugespitzten dritten Antennenglied das mit dem Flügelhinterrande parallele Auslaufen der Analader.

Geographische Verbreitung der Art. — Eine Art aus Süd-Amerika.

1. *P. apotropa*, Hendel, Wien Ent. Zeit. Vol. 28, p. 261 (1909). — Brasilien.
Taf. 2, Fig. 46-48.

15. Genus PARAPHYOLA, nov. gen.

Typische Art : *P. angustifrons*, Hendel.

Charaktere. — Kopf von normaler Grösse, circa so breit wie der Thorax. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten in Profile wie 3 : 2, von vorne wie 5 : 6. Die Stirne ist an ihrer breitesten Stelle über den Fühlern weit schmäler als ein Drittel der Kopfbreite. Sie verjüngt sich aber gegen den Scheitel ganz aussergewöhnlich stark, bis auf ein Siebentel der Kopfbreite, während sie neben den Fühlern nur um ein Geringes verengt erscheint. Die Augenränder sind schwach konkav. Im Profile fällt sie mit starker Wölbung steil ab, tritt kaum etwas über die Augen vor und in gleicher Krümmung weicht dann der Klypeus unter den Augen zurück. Von einem eigentlichen Gesichtswinkel kann also nicht gesprochen werden. Wangen nur linear sichtbar. Stirnfläche der Quere nach eben. Ozellendreieck und Scheitelplatten gut differenziert, nicht ganz bis zur Stirnmitte vorreichend, schmal und durch die dortige Stirnverengung ungewöhnlich aneinandergerückt. Die Scheitelplatten liegen den Augenränden eng an, die Ozellen sind stark nach vorne gerückt und bilden im oberen Stirndrittel ein gestrecktes Dreieck.

Kopfborsten : Eine starke obere Frontorbitalborste an der Spitze der Scheitelplatte, nach hinten gebogen, neben der ersten Ozelle. Die sehr grossen und starken Ozellarborsten sind hinter der vordersten Ozelle inseriert, schwach divergierend nach vorne herabgebogen. Das einzig vorhandene innere Vertikalpaar ist stark, steht in der Verlängerung der Stirnaugenränder und divergiert sogar mit den Spitzen. Das Postvertikalpaar steht etwas hinter der Scheitelkanten und ist stark nach hinten geneigt. Die Beborstung der vorderen Stirnhälfte neben dem Augenrande und auf der Strieme ist die gleiche wie bei der Gattung *Aspistomella*.

Der Hinterkopf ist hinter der mässig scharfen Scheitelkante für den Thorax ausgehöhlt, unten jedoch flacher. Hintere Augenränder schmal.

Der Klypeus weicht, wie schon oben erwähnt, im Profile gleich unter den Fühlern zurück und tritt dann unter der in der Mitte liegenden Querfurche wieder winkelig als Epistom nach vorne vor. Freilich ist das Epistom bei weitem nicht so gross wie bei *Aspistomella*, auch nicht schildartig gewölbt und herabgesenkt, immerhin jedoch ähnlich gebildet. Von vorne betrachtet, ist der obere Teil des Klypeus eben, das unter der Querfurche befindliche Epistom der Quere nach gewölbt. Vertiefungen für die Fühler sind nicht erkennbar. An der Querfurche ist der Klypeus kaum breiter als neben den Fühlern, zum Unterschiede von *Aspistomella*.

Die Stirnspalte zieht im steilen Bogen über die Fühlerwurzeln herum und bildet so eine relativ grosse Lunula Die Spaltenäste divergieren nach unten hin nur sehr wenig, bleiben in geringer Entfermung neben den Facialien, sowie auch neben den Augenrändern und enden neben der Querrinne. Die Facialien laufen fast parallel, während die neben der Querfurche mit ihnen in einen sehr deutlichen Winkel zusammenstossenden Peristomalia nach unten hin stark auseinanderlaufen. Letztere sind lang borstig bewimpert.

Die Wangen sind nur sehr schmal. Die Backen sind ungefähr ein Viertel des lotrechten Augendurchmessers breit und treten etwas hinter dem schiefen Augenrande hervor. Die Backengruben sind unter dem Auge scharf differenziert.

Die Fühler sind wie bei *Aspistomella* gestaltet.

Die ungezeichneten Augen sind etwas schiefliegend, länglich rund. Der Winkel der Augenränder neben den Fühlern ist stumpfer und abgerundeter als bei *Aspistomella*.

Der Mund und seine Teile gleicht ebenfalls jenem der genannten Gattung, nur ist seine Oeffnung nicht so weit.

Dasselbe gilt von der Thoraxform und dem Schildchen. Namentlich ist auch der Brustkorb an den Pleuren vor der Diagonalkante stark hineingedrückt und sind die Sternopleuren verlängert.

Beborstung : Grundbehaarung des Rückens kurz, in Längsreihen geordnet. Humerale eine, Notopleurale zwei. Supraalare drei, hintere Dorsozentralborsten zwei Paare, ebenfalls wie bei *Aspistomella* von der Schildchenfurche entfernt und nicht in der gleichen Reihe wie das schwache Præscutellarpaar stehend. Vier schiefe Schildchenborsten; die an der Spitze stark divergierend.

Pleuren : Meso- und Sternopleuren behaart. Eine starke und ein paar schwache Mesopleuralborsten. Eine Sternopleurale oben hinten. Prothorakale deutlich entwickelt.

Was von den Beinen der *Aspistomella heteroptera* gesagt wurde, gilt auch von unserem Gattungstypus hier.

Der Hinterleib ist schmäler und schlanker als bei der vorigen Gattung und hat fünf sichtbare Segmente, von welchen das fünfte beim ♂ deutlich verlängert ist. Die Behaarung ist eine gleichmässig kurze. Das Hypopyg ist klein und rundlich, das erste Glied des Ovipositors dreieckig, so lang wie breit oder kürzer, oben aber gewölbt.

Der Flügel ist lang und schmal, schwarz, mit einigen hellen Flecken oder Binden. Die Kosta ist ganz gerade und nirgends unterbrochen, der Flügel nicht lappenartig vorspringend. Die Subkosta mündet deutlich vor der Flügelmitte, am Ende allmählich zur Kosta aufbiegend und ist nur bei starker Vergrösserung kurz geschoren pubeszent. Die Mediastina mündet in geringer Entfernung von der Subkosta, Subkostalzelle daher nur schmal. Radialis ein- oder zweimal wellig gebogen. Erste Hinterrandzelle an der Spitze etwas verengt. Die senkrechte kleine Querader steht immer vor der Fügelmitte, aber vor (*angustifrons*) oder jenseits der Mitte der Diskoïdalzelle (*crucifera*). Die Stellung der hinteren Querader variiert. Bei *angustifrons* ist der untere Winkel der Diskoïdalzelle ein stumpfer und sind die letzten zwei Abschnitte der Discoïdalis ungefähr gleich lang. Bei *crucifera* ist der bezeichnete Winkel spitz und ist der letzte Abschnitt der Discoïdalis circa dreimal so lang wie der vorletzte. Analzelle genau wie bei *Aspistomella* geformt und vorne begrenzt. Die Analader geht in eine Falte über, welche nach vorne umbiegt und den Rand nicht erreicht. Axillarfalte deutlich. Schulterlappen schmal. Alula und Thorakalschüppchen normal.

Anmerkung. — Unter den Gattungen mit glatter Stirne und vorne abgerundetem dritten Antennenglied fallen zwei durch die mit dem Flügelhinterrande parallel auslaufende Analader auf : *Aspistomella* und *Paraphyola*. Diese beiden Genera stehen sich aber ausser durch das Flügelgeäder und die Flügelzeichnung, auch durch Kopf-, Körperbau und Habitus ausserordentlich nahe und unterscheiden sich wesentlich nur dadurch, dass letztere keinen vorspringenden Flügellappen an der Kosta und eine am Scheitel ganz ungewöhnlich stark verengte Stirne hat.

Geographische Verbreitung der Arten. — Zwei Arten aus Süd-Amerika.

1. *P. angustifrons*, Hendel, Wien. Ent. Zeit. Vol. 28, p. 261 (1909). — Peru.
Taf. 3, Fig. 52, 53.
2. *P. crucifera*, Hendel, ibidem, p. 262 (1009). Peru.

16. Genus ASPISTOMELLA, nov. gen.

Typische Art : *A. lobioptera*, Hendel.

Charaktere. — Kopf von normaler Grösse, ungefähr so breit wie der Thorax. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile ungefähr wie 11 : 8, von vorne wie 11 : 15. Die Stirne ist an der breitesten Stelle ein Drittel des Kopfes breit. Beim Typus ist sie fast parallelrandig,

kaum etwas nach oben hin schmäler, bei *A. heteroptera* dagegen verjüngt sie sich am Scheitel bis auf zwei Drittel ihrer mittleren Breite. In diesem Falle sind auch die Augenränder deutlicher konkav. Im Profile fällt die Stirne gekrümmt ziemlich steil ab, tritt nur etwas vor die Augen vor und bildet an den Fühlerwurzeln mit der zurückweichenden Linie des Klypeus einen deutlichen, wenn auch nur stumpfen Gesichtswinkel. Die Wangen sind nur linear sichtbar. Die Stirnfläche ist der Quere nach eben. Ozellendreieck und Scheitelplatten gut differenziert, fast oder bis zur Stirnmitte vorreichend, schmal, oben mehr weniger zusammengedrängt. Die Scheitelplatten liegen den Augenrändern eng an, die Ozellen sind von der Scheitelkante weggerückt und bilden im oberen Stirndrittel ein langgestrecktes Dreieck.

Kopfborsten : Je ein bis zwei obere nach hinten gebogene Frontorbitalborsten an der Spitze der Scheitelplatte; die vordere derselben ist aber nur sehr schwach und steht knapp vor der stärkeren. Die aussergewöhnlich grossen und starken Ozellarborsten sind hinter der ersten Ozelle inseriert, schwach divergierend nach vorne herabgebogen. Das starke innere Vertikalpaar ist *parallel*, nach hinten gebogen und so weit nach aussen gerückt, dass es in der Verlängerung der Stirnaugenränder steht. Das Postvertikalpaar steht an der Scheitelkante, ist also von den Ozellen weit entfernt und nach hinten geneigt. In der unteren Stirnhälfte befinden sich auf schmalen Wangenplatten neben dem Auge jederseits eine Reihe gekreutzter unterer Frontorbitalborsten und ausserdem innerhalb derselben auf der Strieme einige gekreuzte Borstenpärchen.

Der Hinterkopf ist hinter der scharfen Scheitelkante stark für den Thorax ausgehöhlt, konkav. Hintere Augenränder schmal. Unterer Hinterkopf flach.

Der Klypeus weicht im Profile gleich unter den Fühlern in gerader Linie zurück, um in der Mitte oder sogar schon über derselben mit einem schildartig gewölbten grossen Epistom winkelig wieder vorzuspringen. Von vorne betrachtet ist der zurückweichende, obere Teil, mit Ausnahme eines schwachen Mittellängskieles, fast eben, während der unter einer scharfen Querrinne liegende Teil, das Epistom, stark der Länge und Quere nach gewölbt ist, weit nach abwärts reicht und stark vortritt. Vertiefungen für die Fühler sind nicht vorhanden. Der Klypeus ist oben schon so breit wie die Stirne und wird nach unten hin immer breiter.

Die Stirnspalte zieht in einem Bogen knapp über die Fühlerwurzeln hin und erzeugt dadurch eine nur kleine Lunula. Die Spaltenschenkel divergieren nach unten hin stark und bleiben in geringer Entfernung neben den Augenrändern, aber auch gleich neben den Facialien. Diese divergieren also ebenfalls ausserordentlich nach unten, sind sehr kurz, denn sie vereinigen sich schon in der Höhe des unteren Augenrandes, etwas unter der Querrinne des Klypeus und dort wo auch die Spaltenschenkel enden, mit den noch stärker nach aussen laufenden Peristomalien in einem abgerundeten Winkel. Durch diese starke Divergenz erhält das umfangreiche Epistom seinem Platz. Im Profile ziehen die Backenleisten unten vom Hinterkopf steil nach vorne und aufwärts, gleich an den Augenrand hinan. Unter diese Linie ist das Epistom auffällig herabgesenkt. Peristomalien lang borstig bewimpert.

Die Wangen sind nur sehr schmal, die Backen ungefähr ein Drittel des lotrechten Augendurchmessers breit. Letztere treten im Profile etwas hinter den schiefen Augenrändern hervor. Backengruben durch Vertiefung und Farbe deutlich differenziert.

Die Fühler sind geneigt, mittellang. An den Wurzeln stehen sie ungefähr in den Stirndritteln. Das erste Glied ist kaum sichtbar, das zweite länger, oben mit einer abstehenden Borste versehen. Das dritte ist zwei- bis dreimal so lang wie das zweite, elliptisch, vorne rund, oben ziemlich gerade, zweimal so lang wie breit. Die Arista ist nackt, gegen die Basis zu etwas dicker, basal inseriert. Im Profile sind die Fühler etwas unter der Augenmitte angewachsen.

Die Augen sind im Leben ungezeichnet, etwas schief, fast lotrecht oval. Neben den Fühlern bilden die Augenränder einen deutlichen, stumpfen Winkel.

Mundöffnung ausserordeutlich gross. Rüssel voluminös, mit grossen Labellen und dickem Kinne. Taster verbreitert, unten beborstet. Prælabrum wohl gross, aber vom Mundrande zum Teile verdeckt, nicht ganz sichtbar.

Thorax schlank. Rücken etwas länger als breit, eckig, mittelmässig gewölbt. Quernahtäste vor den Seitenmitten. Mesopleuren mit einer deutlichen Diagonalkante gekrümmt. Sternopleuren langgestreckt. Schildchen kurz, eiförmig zugespitzt, nur ein Viertel des Rückens lang, aber breit, oben gewölbt, nicht in der Rückenfläche gelegen, sondern etwas emporgerichtet. Querrinne vor demselben scharf.

Beborstung : Grundbehaarung des Rückens kurz, in Längsreihen geordnet. Humerale eine, Notopleurale zwei, Supraalare drei, zwei Paare Dorsozentrale hinten, ein Præscutellarpaar oder es fehlt (*A. heteroptera*). Die Dorsozentralborsten sind von der Schildchenfurche ziemlich weit entfernt und nach vorne gerückt, die hinteren stehen nicht neben den Præscutellaren. Vier schiefstehende Schildchenborsten; jene an der Spitze divergieren.

Pleuren : Meso- und Sternopleuren behaart. Einige Mesopleuralborsten neben der Naht, darunter eine starke. Eine Sternopleurale oben, hinten, Prothorakale schwach.

Beine von normaler Länge und Stärke, eher etwas schlanker. Vorderhüften relativ kurz, nur ganz unten beborstet. Hinterhüften aussen mit zwei Borsten. Vorderschenkel mit zwei starken Borstenreihen posterodorsal und einer Reihe Borsten posteroventral in der Spitzenhälfte. Letztere Reihe fehlt bei *A. heteroptera*. Mittelschenkel in der Mitte anterior mit einer Reihe abstehender Börstchen. Hinterschenkel oben vor der Spitze mit ein paar Börstchen. Mittelschienen innen mit einem langen Endsporn. Füsse lang. Klauen und Pulvillen normal.

Hinterleib (♀) eiförmig, so lang wie der Thorax, mit fünf sichtbaren Segmenten von fast gleicher Länge, nur kurz behaart. Erstes glied des Ovipositors erscheint als eine unmittelbare Fortsetzung des Abdomens, ist gleichseitig dreieckig, oben aber gewölbt.

Flügel gross und lang, vorherrschend schwarz gefärbt, hell gezeichnet. Gerade vor der Mündung der Mediastina ist die Kosta eingeschnitten, so dass ähnlich wie bei *Milichia,* Meigen, ein vorspringender Flügellappen entsteht. Die Spitze des Lappens ist stärker, sogar borstig behaart. Die Kosta ist nirgends gerade. Subkosta und Mediastina liegen nahe beisammen und münden eng nebeneinander, sogar etwas zusammenfliessend, schon im ersten Drittel der Flügellänge, gleich hinter dem Kosteinschnitt. Der Mündungsteil ist aufgebogen. Die Subkosta ist nackt, nur bei starker Vergrösserung kurz geschoren pubeszent. Die Radialis zeigt eine starke Aufwärtsbiegung in der Mitte. Die erste Hinterrandzelle ist nur wenig verengt Die kleine Querader steht senkrecht vor der Mitte der Diskoïdalzelle. Die hintere Querader ist gerade oder etwas geschwungen und steht senkrecht oder nur wenig schief. Die Analzelle ist klein, vorne durch eine im spitzen Winkel hineingebogene Querader abgeschlossen. Der kurze Zipfel der Zelle ist daher ziemlich spitz und schlank. Sehr charakteristisch ist, dass die Analader nicht einmal als Falte den Rand erreicht. Axillarfalte deutlich. Schulterlappen, Alula und Thoraxschüppchen normal.

Anmerkung. — Die wesentlichen Charaktere dieser Gattung sind der spitz vorspringenden Lappen am Flügelvorderrande und das schildförmig vorgewölbte Epistom. Auffallend sind ferner die langen starken Kopfborsten und die vor dem Flügelhinterrande sich verlaufende Analader. Die schlanken Fliegen haben metallisches Kolorit und grosse, bunte Flügel. Am nächsten steht ihnen die *Paraphyola angustifrons*.

Geographische Verbreitung der Arten. — Zwei Arten aus Süd-Amerika.

1. *A. heteroptera,* Hendel, Wien. Ent. Zeit. Vol. 28, p. 266 (1909). — Peru.
Taf. 3, Fig. 54, 55.

2. *A. lobioptera,* Hendel, ibidem, p. 264 (1909). — **Taf. 3, Fig. 56, 57.** Bolivia, Peru.

17. Genus ACROSTICTA, Loew

Acrosticta. Loew, Berl. Ent. Zeitschr. Vol. 11, p. 293 (1867); Mon. N. Amer. Dipt. Vol. 3. p. 151 (1873); Aldrich, Cat. N. Amer. Dipt. p. 595 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 278 (1908); Hendel, Wien. Ent. Zeit. Vol. 28, p. 248 (1909).

Typische Art : *A. scrobiculata*, Loew.

Charaktere. — Kopf von normaler Breite, nur wenig breiter als der Thorax. Beim Typus verhält sich der lotrechte Kopfdurchmesser zum wagrechten im Profile wie 4 : 3, von vorne wie 10 : 13. Die Stirne ist von mässiger Breite, höchstens ein Drittel des Kopfes breit, meist aber etwas schmäler, parallelrandig oder schwach nach vorne hin verengt. Im Profile hat sie eine mittlere Neigung, tritt etwas über die Augen vor, so dass die Wangen kaum sichtbar werden, und bildet an den Fühlerwurzeln mit dem Untergesichte einen stumpfen Stirnwinkel. Die flache Stirnfläche ist länger als breit, rechteckig oder trapezförmig. Das Ozellendreieck ist sehr klein und umschliesst nur gerade die an der Scheitelkante in Form eines gleichseitigen Dreieckes eng beisammen liegenden Ozellen. Die Scheitelplatten sind gut ausgebildet, breit und reichen auch weiter vor, oft fast bis zur Stirnmitte. Der restliche Stirnteil ist mit Ausnahme des glatten Augenrandes in verschiedenem Grade runzelig-grubig.

Kopfborsten : Jederseits hinter einander auf den Scheitelplatten zwei obere nach hinten gebogene Frontorbitalborsten, wovon die vordere gerade nach vorne an der Spitze steht und schwächer ist. Bei manchen Arten (*A. foveolata*) schliessen sich vorne die allmählich an Länge und Stärke abnehmenden und weiter nach auswärts gebogenen Börstchen an den Wangenplatten des vorderen Augenrandes gleichsam als Fortsetzung an, während sie bei anderen viel schwächer bleiben. Ozellarborsten schwach, hinter der ersten Ozelle, nach vorne und aussen gebogen. Die äusseren Vertikalborsten stehen in der Verlängerung der Augenränder und divergieren, die inneren dazwischen konvergieren. Das Postvertikalpaar steht knapp hinter der Scheitelkante und ist schwach nach hinten geneigt. Die runzelig-punktierte Stirnstrieme ist relativ lang, manchmal sogar borstlich rauh behaart.

Der Hinterkopf fällt hinter der scharfen Scheitelkante steil ab und ist oben für den Thorax deutlich konkav, unten flach. Die hinteren Augenränder treten kaum hervor.

Der Klypeus ist im Profile eine winkelig gebrochene oder eine konkave bis fast gerade und lotrechte Linie. Im ersteren Falle weicht der Klypeus unter den Fühlern etwas zurück und das Epistom tritt unter der Mitte wieder vor. Von vorne gesehen ist der obere Teil des Klypeus im Allgemeinen eben zu nennen, der untere ist der Quere nach gewölbt; beide trennt die Querfurche, die manchmal nur angedeutet ist. Fühlervertiefungen sind nicht erkennbar. Der Mundrand ist nicht mehr als normal hinaufgezogen.

Die Stirnspalte verläuft bogig über die Fühlerwurzeln hinweg und erzeugt so eine deutliche mit einer schwachen Querkante versehene Lunala. Die Spaltenäste, ebenso wie die gleich innerhalb derselben parallel laufenden Facialien divergieren ziemlich stark nach unten hin, so dass letztere mit den kurzen, bewimperten Backenleisten einen wenig merklichen stumpfen Winkel bilden und das Vibrisseneck nur im Profile besser kenntlich wird.

Die Wangen sind von geringer Breite, ebenso die Backen, die nur ein Sechstel bis ein Fünftel der Augenhöhe breit werden und unter dem Auge scharf differenzierte Backengruben zeigen. Unten sind sie fast wagrecht und hinter den Augen treten sie nur wenig hervor.

Fühler geneigt, so lange wie das Untergesicht, an den Wurzeln etwas weiter als ein Drittel der dortigen Stirnbreite von einander entfernt. Die zwei Basalglieder wie gewöhnlich kurz, das zweite oben mit einer abstehenden Borste. Das dritte Glied ist lang oval, oben und unten fast geradrandig und

parallel oder oben kaum merklich konkav, am Ende abgerundet, zweimal so lang wie breit oder länger. Arista basal, nackt, an der Wurzel etwas stärker. Im Profile stehen die Fühler an und unter der Augenmitte.

Die im Leben einfärbig ungezeichneten Augen sind lotrecht länglich oval. Das Augeneck neben den Fühlern beträgt circa 120° und ist ziemlich scharf.

Mundöffnung und Rüssel relativ gross, letzterer dick, mit starkem Kinne. Taster verbreitert, unten borstig. Prælabrum gross und breit, sichtbar vortretend und an den Mundrand anschliessend.

Thorax kräftig, normal. Rücken ungefähr so lang wie breit, eckig, von mittlerer Wölbung. Die Quernahtäste liegen etwas vor den Seitenmitten. Pleuren diagonal etwas stärker gewölbt. Sternopleuren kurz. Schildchen kurz, nur ein Viertel des Rückens lang, eiförmig, oben gewölbt, nackt, durch eine scharfe Querrinne getrennt und über die Rückenfläche etwas emporgerichtet.

Beborstung : Grundbehaarung des Rückens kurz und fein, in Längsreihen geordnet. Eine Humerale, zwei Notopleurale, drei Supraalare, zwei Paare Dorsozentrale hinten und ein Paar Præscutellare in einer Reihe mit dem hinteren Dorsozentralpaar. Vier schiefstehende, fast parallele Schildchenborsten.

Pleuren : Meso- und Sternopleuren behaart. Längs der Naht eine starke Mesopleurale; eine Sternopleurale oben, hinten. Prothorakale meist gut entwickelt.

Beine von normaler Länge und Stärke. Vorderhüften vorne nur ganz unten beborstet. Hinterhüften aussen mit zwei Borsten. Vorderschenkel posterodorsal mit zwei Reihen Borsten der ganzen Länge nach, posteroventral mit einer Reihe starker Borsten in der Spitzenhälfte besetzt. Mittelschenkel vorne mit kurzen abstehenden Börstchen versehen, hinten lang gewimpert. Hinterschenkel mit den gewöhnlichen Börstchen anterodorsal vor der Spitze. Schienen etwas gebogen. Mittelschienen innen mit einem stärkeren Endsporn. Vorderfüsse etwas kürzer als die übrigen. Klauen und Pulvillen normal.

Hinterleib eiförmig zugespitzt, so lang wie der Thorax. Von den gewöhnlich fünf sichtbaren Segmenten sind bei dieser Gattung nicht immer alle wahrzunehmen. Beim ♂ der Arten *pallipes* und *ruficauda* ist das dritte Tergit stark verlängert, das vierte ungefähr die Hälfte des dritten lang und das fünfte noch etwas kürzer. Beim ♂ von *profunda* ist von den fünf sichtbaren Ringen der vierte der längste. Die ♀ der Arten *scrobiculata* und *ruficauda* lassen hinter dem basalen Doppelsegment überhaupt nur das aussergewöhnlich stark verlängerte dritte Tergit sehen. Zwischen denselben und dem Ovipositor sind die Tergite 4 und 5 selten unter dem Hinterrande des dritten als ganz schmale und wie es scheint minder hart chitinisierte Falten zu erkennen. Bei den ♀ von *foveolata* und *pallipes* ist das vierte Tergit ungefähr von der Länge des halben dritten sichtbar, das fünfte aber auch wieder verdeckt. Das erste Glied des Ovipositors ist so breit wie der Hinterleib, an den Seiten konvex begrenzt, von mittlerer Länge — nach den Arten hierin in geringen Grenzen verschieden — hinten zugespitzt, oben konkav. Behaarung und Beborstung kurz, unauffällig.

Flügel glashell mit dunklem Vorderrande und dunklem Spitzenfleck. Kosta und Subkosta gerade. Letztere unter sehr spitzem Winkel weit jenseits der Flügelmitte und in ziemlicher Entfernung von der Mündung der Mediastina mündend. Die Subkostalzelle ist daher von einer charakteristischen spitzen Schlankheit und Länge. Die Subkosta ist bei keiner der Arten eigentlich nackt zu nennen, bei einigen (z. B. *scrobiculata* und *foveolata*) ist ihr Ende sogar deutlich mit Börstchen besetzt. Die übrigen Längsadern sind ebenfalls alle gerade, höchstens der allmählich mit der Cubitalis konvergierende letzte Abschnitt der Discoïdalis sehr sanft gebogen Beide Queradern sind gerade und fast senkrecht, die kleine ungefähr in der Mitte des Flügels und der Discoïdalzelle. Die Analzelle ist gross, vorne durch eine im stumpfen Winkel gebrochene Querader abgeschlossen und unten in einen ziemlich langen, keilförmigen und kräftigen Zipfel ausgezogen. Die Analader erreicht als Falte den Hinterrand. Axillarfalte vorhanden. Schulterlappen und Alula kräftig entwickelt. Schüppchen normal.

Anmerkung. — Von den durch eine grubig-runzelige Stirne ausgezeichneten Gattungen hat ausser *Acrosticta* nur noch *Siopa* ein durch die völlig geraden Flügellängsadern charakterisiertes Geäder. *Siopa* unterscheidet sich aber durch mehrere Merkmale so wesentlich, dass ich ihr Gattungsrecht nicht bezweifle. Ausser den in der Tabelle ohnehin schon angegebenen Unterschieden möchte ich noch folgende Eigenschaften von *Siopa* hinzufügen : 1° Stirne breiter als lang; 2° der Stirnwinkel ist schärfer, viel weniger stumpf; 3° der stark hinaufgezogene Mundrand; 4° die oben gerade Stirnspalte; 5° die nicht scharf abgegrenzten Backengruben; 6° das nicht emporgerichtete Schildchen.

Diejenigen Arten des Genus *Euxesta*, welche eine fast gleiche Flügeladerung wie *Acrosticta* haben, sind an der glatten Stirne und daran zu erkennen, dass das dritte Fühlerglied nie länger als zweimal so lang wie breit ist und den Mundrand nie erreicht.

Geographische Verbreitung der Arten. — Sieben Arten aus Nord- und Süd-Amerika.

— *A. bicolor*, Cresson, Trans. Amer. Ent. Soc. Vol. 32, p. 285, pl. 6, f. 8-10 (1906) 1). Nord-Amerika.

1. *A. dichroa*, Loew, Berl. Ent. Zeitschr. Vol. 18, p 384 (6) (1874). Nord-Amerika.
   dichroa, Coquillett, Invert. Pacif. Vol. 1, p. 29 (1904); Hendel, Wien. Ent. Zeit. Vol. 28, p. 248 (1909).
2. *A. foveolata*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 294 (2) (1867). — **Taf. 3, Fig. 61, 62.** Brasilien.
   foveolata, Hendel, Wien. Ent. Zeit. Vol. 28, p. 251 (1909).
3. *A. fulvipes*, Coquillett, Journ. New York Ent. Soc. Vol 8, p. 24 (1900). Nord-Amerika.
   fulvipes, Hendel, Wien. Ent. Zeit. Vol. 28, p. 248 (1909).
4. *A. pallipes*, Grimshaw, Fauna Hawaii. Dipt. p. 44 (1901). Hawaiische Inseln, Bolivia.
   pallipes, Hendel, Wien. Ent. Zeit. Vol. 28, p. 249 (2) (1909).
5. *A. profunda*, Hendel, ibidem, p. 251 (4) (1909). Bolivia.
6. *A. ruficauda*, Hendel, ibidem, p. 250 (3) (1909). — **Taf. 3, Fig. 66.** Peru, Bolivia.
7. **A. rufiventris, nov. sp.** 2). — **Taf. 4, Fig. 101.** Nord-Amerika.
8. *A. scrobiculata*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 293 (1), pl. 2, f. 5 (1867). — **Taf. 3, Fig. 63-65.** Mexico, Peru, Brasilien.
   scrobiculata, Giglio-Tos, Ditteri del Messico, Vol. 4, p. 42 (1895); Hendel, Wien. Ent. Zeit. Vol. 28, p. 249 (1) (1909).
9. **A. Wytsmani, nov. sp.** 3). Peru.

18. Genus SIOPA, nov. gen.

Typische Art : *S. longicornis*, Hendel.

Charaktere. — Kopf breit, merklich breiter als der Thorax. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 9 : 7, von vorne wie 3 : 5. Die vollständig parallelrandige Stirne ist sehr breit, fünf Zwölftel des Kopfes breit und flach; im Profile hat sie eine mittlere Neigung, tritt etwas über die Augen vor, so dass auch die Wangen sichtbar werden, und bildet mit dem zurücktretenden Untergesicht an den Fühlerwurzeln einen scharfen, nicht sehr stumpfen Stirnwinkel. Die

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1) Ist wegen der glatten Stirne, der Kopfform, des granulierten Abdomens u. s. w. keine *Acrosticta*-Art in unserem Sinne, sondern wahrscheinlich der Representant einer neuen Ulidiinen-Gattung.

2) **A. rufiventris, nov. sp.** — 1 ♀ Texas (N. Am.). Von Prof. Aldrich. Stirne oben so breit wie ein Auge, *nach vorne hin breiter werdend*, in der oberen Hälfte runzelig grubig. Frontorbitalborsten klein, ganz oben inseriert. Kopf und seine Anhänge, sowie die Beine rotgelb, die hinteren Schienen etwas dunkler. Oberer Hinterkopf, mit Ausnahme des Cerebrales, Ozellen und Scheitelplatten, und der Thorax samt Schildchen metallisch stahlblau; Rücken dicht weiss bereift, dunkel punktiert. Hinterleib ganz blutrot; drittes Tergit verlängert, Körper 5 mm , Flügel 4-5 mm. lang.

3) **A. Wytsmani, nov. sp.** — 2 ♀ aus Peru. Von Abt Czerny. Der *A. ruficauda*, Hendel, ähnlich. Stirne vorne merklich verengt, schmäler als ein Auge. Strieme nur schwach punktiert, ohne Runzeln. Thorax stahlblau, Schildchen unten und an der Spitze rot. Hinterleib schwarz; drittes Tergit länger als das halbe Abdomen, bis an die rotgelbe Legeröhre reichend. Bauch gelb. Beine braun, Schenkel an der Wurzel und Spitze rötlich. Hintere Füsse und Ferse der vordersten gelb. Kostal- und Subkostalzelle ganz braun. Der Apikalfleck der Flügel endet zwischen der dritten und vierten Längsader. Der letzte Abschnitt der Discoïdalis fast doppelt so lang wie der vorletzte. Schwinger bräunlich Körper und Flügel circa 3 mm. lang. Herrn P. Wytsman in Brüssel gewidmet.

nicht gewölbte Stirnfläche ist breiter als lang, rechteckig. Das Ozellendreieck ist oben die Hälfte der Stirne breit und reicht mit der Spitze bis an den Vorderrand. Der vor den Ozellen liegende Spitzenteil desselben ist lanzenförmig, deutlich abgesetzt erhaben und zeigt in der Mitte der Konvexität ein Grübchen. Die beiden Seitenschenkel des Ozellendreiecks sind in der Basishälfte — also wenig über die Stirnmitte nach vorne hinaus — mit je einer Reihe dicht nebeneinander stehender, kurzer nach innen gebogener Börstchen besetzt. Diese beiden Börstchenreihen erscheinen dem unbewaffneten Auge als zwei nach vorne hin konvergierende Striche auf der Stirne. Die breiten Scheitelplatten sind oben ein Viertel der Stirne breit und erreichen mit den Spitzen kaum die Stirnmitte. Ihre Fortsetzung bleibt auf der daneben runzeligen Stirne als glatter, nach vorne hin immer schmäler werdender Raum neben den Augen sichtbar. Der restliche Teil der Strieme zwischen dem glatten Augenrande und dem konvexen Ozellendreieck ist durch vertiefte Hohlpunkte runzelig grubig. Die Ozellen liegen eng zusammengedrängt ganz oben am Scheitel und bilden ein fast gleichseitiges Dreieck.

Kopfborsten : Jederseits auf den Scheitelplatten zwei schwache obere nach hinten gebogene Frontorbitalborsten, deren vordere kleiner und dem Augenrande näher gerückt ist. Ozellarborsten ebenfalls schwach, hinter der ersten Ozelle inseriert und nach seitwärts gebogen. Innere Scheitelborsten einwärts gerückt, konvergierend. Die äusseren Vertikalborsten stehen in der Verlängerung der Stirnaugenränder und divergieren. Der runzelige Teil der Stirne ist mit kurzer und feiner Behaarung in den Grübchen dicht bedeckt. Das Postvertikalpaar steht knapp hinter der Scheitelkante und ist nach hinten geneigt.

Der Hinterkopf fällt hinter der abgerundeten Scheitelkante steil ab, ist aber oben für den Thorax nur wenig ausgehöhlt. Der untere Hinterkopf ist schwach konvex. Die hinteren Augenränder treten etwas vor.

Im Profile tritt der Klypeus merklich über die Gesichtsleisten vor und zeigt im Ganzen eine in der Mitte fast rechwinkelig gebrochene gerade Linie. Der obere Klypeus weicht nämlich zurück und der untere (Epistom) springt unter einer scharfen Querrinne wieder nach vorne vor. Von vorne betrachtet hat der Klypeus einen trapezförmigen Umriss, da er unten viel breiter als oben ist, und ist überhaupt breiter als hoch. Der obere, zurückweichende Teil ist fast eben, der untere, wieder vortretende Teil stark der Quere nach gewölbt. Die Querrinne liegt in der Mitte. An der Innenseite der Facialien sind seichte Längsgruben für die Fühler erkennbar. Der Mundrand ist stark hinaufgezogen, was besonders im Profile auffällt.

Die Stirnspalte zieht geradlinig über die Fühlerwurzeln hinweg und lässt vor sich die Lunula als scharfe gerade Querkante von geringer Breite sichtbar vortreten, welche sich beiderseits als Gesichtsleisten divergierend nach unten hin fortsetzt. In geringer Entfernung ausserhalb der geraden Facialien verlaufen die gebogenen ebenfalls divergierenden Spaltenäste nach abwärts, auch fast bis zum Mundrande reichend, da die nur sehr zart bewimperten Peristomalien bloss im Profile deutlich von den Facialien unterschieden werden können. Vibrisseneck kenntlich.

Wangen von mittlerer Breite. Backen kaum ein Drittel des lotrechten Augendurchmessers breit, aus dem nach vorne gebogenen unteren Hinterkopf gebildet. Backengruben nur bis zum unteren Augenrande reichend, nicht scharf abgesetzt. Die Backen sind hinten nicht herabgesenkt, sie treten aber hinter dem schiefen Augenrande etwas hervor.

Fühler geneigt, lang, länger als das Untergesicht, an den Wurzeln weit von einander entfernt, weiter als ein Drittel der dortigen Stirnbreite. Beide Basalglieder kurz, das erste von aussen kaum sichtbar, das zweite länger und oben mit einer abstehenden Borste versehen. Das dritte Glied ist auffallend verlängert, fast linear, nur an der Aristawurzel etwas breiter, an der Spitze abgerundet, oben und unten gerade und circa viermal so lang wie breit. Die Arista ist nackt, an der Basis etwas verdickt und fast basal inseriert. Im Profile stehen die Fühler beinahe der Augenmitte gegenüber.

Die Augen sind im Leben einfärbig ungezeichnet und fast lotrecht oval. Das Augeneck neben den Fühlern ist scharf, geradschenkelig und ungefähr 120° gross.

Mundöffnung gross, namentlich sehr breit und auch hinten hinaufgezogen. Rüssel voluminös, mit grossen Labellen und starkem Kinne. Taster verbreitert, unten beborstet. Prælabrum ausserordentlich gross, hoch und breit, schildartig vorspringend, den ausgeschnittenen Mundrand verdeckend.

Thorax kurz, kräftig. Rücken ungefähr so lang wie breit, eckig, stark gewölbt. Quernahtäste vor den Seitenmitten. Pleuren in der Mitte diagonal viel stärker gewölbt. Sternopleuren kurz. Schildchen kurz, nur ein Viertel des Rückens lang, eiförmig, oben gewölbt und nackt, durch eine Querrinne vom Rücken getrennt, aber nicht aufgerichtet, sondern in gleicher Ebene wie der Rücken.

Beborstung : Grundbehaarung des Rückens kurz und spärlich, wenig sichtbar. Humerale eine, Notopleurale zwei, Supraalare drei, ein Paar Dorsozentrale ganz hinten und dazwischen in einer Reihe ein Paar Præscutellare. Vier schiefstehende fast parallele Schildchenborsten.

Pleuren : Meso- und Sternopleuren behaart. Längs der Naht eine starke Mesopleuralborste oben, neben mehreren Börstchen. Eine Sternopleurale oben, hinten. Prothorakale nur sehr schwach.

Beine kräftig, mittellang. Vorderhüften vorne nur ganz unten beborstet, von normaler Länge. Hinterhüften aussen mit zwei Borsten. Vorderschenkel mit Reihen langer Borsten besetzt, zweie posterodorsal, eine etwas kräftigere posteroventral. Mittelschenkel vorne in der Mitte mit ein Paar kurzen Borstenhärchen, posterior der ganzen Länge nach lang bewimpert. Hinterschenkel mit den gewöhnlichen anterodorsalen Borsten vor der Spitze. Schienen mässig gebogen, die mittleren mit einem Endsporne innen. Vorderfüsse relativ kürzer als die übrigen. Klauen und Pulvillen wie gewöhnlich.

Hinterleib eiförmig, vor der Mitte ziemlich breit, glatt, nur sehr spärlich behaart, mit fünf sichtbaren Segmenten; beim ♂ ist das fünfte Tergit stark verlängert, so lange wie die zwei vorhergehenden zusammen genommen, beim ♀ dagegen ganz aussergewöhnlich verkürzt, auf eine kaum über den Hinterrand des vierten, längsten Tergites ragende Querwulst reduziert. Hypopyg mittelgross, kugelig. Erstes Glied des Ovipositors lang, länger als an der dem Hinterleibe ziemlich anschliessenden Wurzel breit, an den Seiten gerade, oben hohl.

Flügel ganz wie bei der Gattung *Acrosticta*, mit denselben geraden, steifen Adern, der langen, schmalen Subkostalzelle und der gleichen Zeichnung. Subkosta nackt, weit jenseits der Flügelmitte mündend. Alles wie bei der Loew'schen Gattung.

Anmerkung. — Siehe meine Bemerkung bei der Gattung *Acrosticta*, Loew.

Geographische Verbreitung der Art. — Eine Art aus Süd-Amerika.

1. *S. longicornis*, Hendel, Wien. Ent. Zeit. Vol. 28, p, 253 (1909). — Peru.
Taf. 3, Fig. 67-69.

19. Genus CENCHROMETOPA, nov. gen.

Typische Art : *C. curvinervis*, Hendel 1).

Charaktere. — Kopf auffallend breit, merklich breiter als der Thorax und stark von vorne her zusammengedrückt. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 14 : 9, von vorne wie 2 : 3. Die parallelrandige Stirne ist ausserordentlich breit, ungefähr so breit wie der halbe Kopf und fast eben. Im Profile hat sie eine mittlere Neigung, tritt ziemlich weit über die Augen vor, so dass auch die breiten Wangen auffallen, und bildet mit dem zurückweichenden gerade Facialienprofil einen nur wenig stumpfen, fast rechten Stirnwinkel. Der Scheitel dieses Winkels liegt im

1) Bisher nur im weiblichen Geschlechte bekannt.

Profile als ziemlich scharfe Ecke über, nicht an der Insertionsstelle der Fühler. Die ganze Fläche der Stirnstrieme ist mit eng neibeneinander liegenden tiefen und ziemlich groben Hohlpunkten bedekt, in welchen die dichte und verhältnismässig lange, aber feine Grundbehaarung wurzelt. Scheitelplatten deutlich differenziert; sie liegen dem Augenrande an, sind oben sehr breit und reichen mit der Spitze bis zur Mitte des Stirnangenrandes vor. Ozellen ganz oben am Scheitelrande, eng zusammengedrängt, ein gleichseitiges Dreieck bildend.

Kopfborsten : In der Höhe der ersten Ozelle stehen zwei kräftige Frontorbitalborsten nebeneinander (nicht hintereinander). Sie sind nach hinten und wenig nach innen gebogen und etwas vom Augenrande entfernt. Vor der äusseren dieser zwei Borsten sieht man auf den Scheitelplatten eine Reihe von vier bis fünf kleiner, nach aussen gebogener Börstchen hintereinander. Wenig hinter der ersten Ozelle steht das kräftige, nach hinten und aussen divergierende Ozellenborstenpaar. Das innere Vertikalpaar ist stark nach einwärts gerückt und konvergiert. Das äussere Paar steht in der Verlängerung der Stirnaugenränder und in einer Reihe mit den Hinterhauptscilien; es divergiert. Das starke Postvertikalpaar steht in geringer Entfernung hinter den Ozellen, gerade an der Scheitelkante.

Der Hinterkopf fällt hinter der scharfen Scheitelkante steil ab und ist oben für den Thorax stark konkav ausgehöhlt. Hintere Augenränder sehr schmal. Unterer Hinterkopf flach.

Der Klypeus ist zwischen die Gesichtsleisten eingesenkt, so dass er im Profile nicht geschen werden kann. Man seiht nur das Profil der Gesichtsleisten, die geradlinig nach hinten zurückweichen und ganz unten den kurzen vorspringenden Mundrand. Mit Ausnahme des schmalen vortretenden Epistoms ist die ganze Klypeusfläche unterhalb der Fühler in Form einer queren Mulde vertieft. Nur längs der Mitte zeigt sich eine ganz sanfte Erhöhung. Durch den Mundrand wird eine scharfe Querrinne gebildet. Der ganze Klypeus mit der Lunula ist etwas breiter als hoch, ohne Lunula doppelt so breit wie hoch und von trapezförmigem Umrisse. Seine grösste Breite beträgt ungefähr zwei Drittel der Stirnbreite.

Die Stirnspalte zieht in einem Bogen hoch über die Fühlerwurzeln hinweg und erzeugt dadurch eine sehr grosse Lunula. Die Fläche derselben weicht aber mit dem Untergesichte zurück, so dass die Fühler unter der Stirnkante zu sitzen kommen. Die Spaltenschenkel laufen unmittelbar neben den Facialien divergierend nach unten und enden in der Nähe der Mundrandsquerrinne. Da die scharfen Gesichtsleisten fast bis zum Mundrande herabreichen, sind die Backenleisten sehr kurz und von vorne wenig sichtbar. Das Vibrisseneck abgerundet.

Die Wangen sind neben den Fühlern ein Drittel des Klypeus breit und fallen ausserdem dadurch auf, dass sie neben dem tiefer liegenden Klypeus wie vortretende Leisten erscheinen. Die Backen sind nur ein Viertel des lotrechten Augendurchmessers breit, hinten weder vorgequollen, noch herabgesenkt. Der behaarte untere Hinterkopfsteil biegt allmählich nach vorne um. Peristomalien ziemlich lang bewimpert. Backengruben nicht scharf abgesetzt; sie ziehen wenigstens nicht bis unter die Augen hinab.

Fühler mittellang, in den Dritteln der Stirnbreite inseriert, herabhängend. Basalglied sehr kurz, ringförmig; zweites Glied von aussen schon sichtbar, kurz, oben mit einer abstehenden Borste; drittes Glied wenig länger als breit, fast scheibenrund, relativ gros. Die basale Arista ist nackt, an der Wurzel etwas spindelig verdickt. Im Profile erreichen die Fühler fast den unteren Mundrand und sind unter der Augenmitte inseriert.

Die Augen sind im Leben einfärbig, unbandiert und lotrecht oval. Ihre Oberfläche ist eigentümlich glatt poliert, stark glänzend. Der wagrechte Durchmesser derselben beträgt im Profile drei Viertel des lotrechten. Das Augeneck neben den Fühlern ist scharf und geradschenkelig und ungefähr 120° gross.

Mundöffnung von normaler Grösse; ebenso der Rüssel und die Taster. Labellen relativ kurz. Kinn gut entwickelt. Taster nach vorne zu ziemlich stark verbreitert, unten beborstet. Prælabrum klein und schmal, aber deutlich von vorne sichtbar, vorspringend.

Thorax kräftig. Rücken wenig länger als breit, vorne eckig, nach hinten zu kaum merklich schmäler; er ist der Länge und Quere nach stark gewölbt. Die Quernahtäste liegen ungefähr in den Seitenmitten. Pleuren in der Mitte stärker gewölbt. Eine Diagonalkante der Mesopleuren ist nur oben angedeutet. Die Gegend unter den Prothorakalstigmen etwas stärker vertieft. Schildchen ein Drittel des Rückens lang, eiförmig zugespitzt, oben nackt, deutlich gewölbt, durch eine scharfe Furche von der Rückenfläche getrennt, am Rande ziemlich scharfkantig.

Beborstung : Grundbehaarung des Rückens kurz, dicht und fein, aber nicht in Längsreihen geordnet. Humerale eine, Notopleurale zwei, Supraalare drei, ein Paar Dorsozentrale ganz hinten und dazwischen vier Præscutellare in einer Reihe nebeneinander. Vier schiefstehende, fast parallele Schildchenborsten.

Pleuren : Meso- und Sternopleuren behaart. Längs der Naht eine Reihe oben stärkerer Mesopleuralborsten. Eine Sternopleurale oben, hinten. Prothorax mit einigen deutlichen Börstchen.

Beine von normaler Länge, kräftig. Vorderhüften kurz, nur ganz unten beborstet. Hinterhüften aussen mit zwei Borsten. Die Schenkel sind etwas dicker als normal, die Schienen etwas seitlich zusammengedrückt und verbreitert und auch etwas gebogen, am deutlichsten das hinterste Paar. Die Vorderbeine sind merklich verkürzt, besonders deren Füsse. Aber auch an den hinteren zwei Beinpaaren sind die Füsse auffallend kürzer als es normal ist. Vorderschenkel mit Borstenlängsreihen posterodorsal und -ventral. Mittelschenkel hinten der ganzen Länge nach mit Borstenhaaren besetzt. Hinterschenkel vor der Spitze anterodorsal mit einigen Börstchen. Mittelschienen innen mit einem Endsporne. Klauen und Pulvillen klein.

Hinterleib eiförmig zugespitzt, von der Länge des Thorax, mit fünf sichtbaren Segmenten von ungefähr gleicher Länge, wie der Thorax behaart, ohne längere Beborstung. Erstes Glied des Ovipositors spitz-trapezförmig, etwas länger als an der Wurzel breit, an den Seiten gerade, allmählich aus dem Hinterleibe heraustretend, wie der übrige Hinterleib behaart.

Flügel mit normalem Umrisse, nur wenig zugespitzt; glashell, vorne und an der Spitze gefleckt. Kosta vorne gerade. Subkosta fast gerade, etwas hinter der Flügelmitte mündend, jenseits der Mediastina zart, aber deutlich behaart. Mediastina allmählich zur Kosta aufbiegend, eine kurze und schmale Subkostalzelle bildend Radialis und letzter Abschnitt der Cubitalis sehr flach wellig, zuerst nach oben, dann nach unten und an der Spitze deutlich wieder zur Costa aufbiegend. Letzter Abschnitt der Discoïdalis ebenfalls allmählich aufgebogen, noch vor der Flügelspitze mündend. Die verengte Spitze der ersten Hinterrandzelle mündet demnach nicht an der Flügelspitze, sondern ist vor derselben hinauf gebogen. Kleine Querader schief, vor der Mitte der Discoïdalzelle. Hintere Querader gerade, stark schief liegend; der Winkel mit der Posticalis ist ein stumpfer. Analzelle gross und lang, mit kräftiger keilförmiger Spitze, welche kürzer als der restliche Teil der Analader ist. Die vorne schliessende Querader ist stumpfwinkelig gebrochen. Die Analader erreicht nur als gebogene Falte den Rand. Axillarfalte deutlich. Schulterlappen normal vortretend. Alula stark entwickelt. Thoraxschüppchen normal.

Anmerkung. — Unsere Gattung hat ausser den in der analytischen Tabelle angeführten Unterscheidungsmerkmalen noch folgende Eigentümlichkeiten, wodurch sie sich von den mit *Acrosticta* verwandten Gattungen trennt: Die Frontorbitalborsten stehen auf der ganz aussergewöhnlich breiten Stirne nebeneinander, nicht hintereinander; die Wangen sind sehr breit; die Fühler sitzen im Profile unter der Stirnkante; der Klypeus wird im Profile von den Facialien ganz verdeckt; es sind vier Præscutellarborsten vorhanden. Aber auch das kurz ovale dritte Fühlerglied muss gegenüber den immer mehr weniger linear verlängerten Gliedern der anderen Gattungen, *Siopa* und auch *Acrosticta*, erwähnt werden.

Geographische Verbreitung der Art. — Eine Art aus Süd-Amerika.

1. *C. curvinervis*, Hendel, Wien. Ent. Zeit. Vol. 28, p. 251 (1909). — Peru.

Taf. 2, Fig. 70-72.

20. Genus EUPHARA, Loew

Euphara. Loew, Berl. Ent. Zeitschr. Vol. 11, p. 291, pl. 2, f. 4 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 150, pl. 9, f. 4 (1873); Williston, Man. N. Amer. Dipt. (ed. 3), p. 278 und p. 273, f. 18 (1908).

Typische Art : *E. caerulea*, Macquart.

Charaktere. — Kopf breiter als der Thorax, ziemlich stark von vorne her zusammengedrückt. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 10 : 7, von vorne wie 18 : 25. Die Stirne ist vorne ein Drittel des Kopfes breit, verschmälert sich kaum merklich gegen den Scheitel zu und hat gerade Ränder. Im Profile ist sie stark geneigt, tritt an den Fühlerwurzeln ganz wenig über die Augen vor und bildet mit dem oben zurückweichenden Klypeus einen sehr stumpfen Stirnwinkel. Die Wangen sind nur sehr schmal sichtbar. Die Stirnfläche selbst ist der Länge nach wenig, der Quere nach nicht gewölbt, länger als breit und an den Borstenwurzeln der Stirnseiten mit grösseren, an denjenigen der Stirnmitte mit kleineren Grübchen bedeckt, die aber mehr durch die dunkle Farbe auf dem heller bestäubten Grunde als durch ihre Tiefe und Schärfe auffallen. Runzlig-grubig kann die Stirne nie genannt werden, weil die Grübchen nie so tief sind, dass sie die Stirnfläche runzelig zusammenziehen würden. Ozellen und Scheitelplatten nicht scharf abgegrenzt, doch immerhin erkennbar; letztere schmal, eng dem Augenrande anliegend und fast bis zur Stirnmitte vorreichend, erstere etwas kürzer, die drei, ein langgestrecktes Dreieck bildenden Ozellen tragend. Die beiden hinteren Ozellen liegen aber nicht wie bei *Notogramma* hart an der Scheitelkante, sondern ein merkliches Stück vor derselben.

Kopfborsten : Jederseits auf den Scheitelplatten zwei nach hinten und aussen gebogene obere Frontorbitalborsten, die obere davon stärker. Hinter der ersten Ozelle ein starkes und langes Paar Ozellarborsten, nach vorne geneigt und divergierend. Innere Scheitelborsten parallel und fast in der Verlängerung der Stirnaugenränder stehend, äussere wenig ausserhalb derselben. Die kräftigen Postvertikalborsten stehen an der Scheitelkante und sind nach hinten geneigt. Auf den grubigen Wangenplatten der Vorderstirne jederseits drei ziemlich starke nach einwärts gebogene untere Frontorbitalborsten und innerhalb derselben auf der ganzen Strieme noch mehr Paare gekreuzter Börstchen.

Der Hinterkopf ist oben fast in gleicher Stärke wie bei *Notogramma* ausgehöhlt.

Der Klypeus ist im Profile eine in der Mitte winkelig gebrochene Linie von geringer Länge, oben zurückweichend, unten wieder stark vortretend. Der Mundrand ist im Vergleiche mit *Notogramma* nur wenig hinaufgezogen, dafür aber stärker über die Facialien vorspringend. Von vorne betrachtet zeigt der Klypeus eine scharfe Querrinne, unter derselben das der Quere nach gewölbte Epistom. Vertiefungen für die Fühler sind nicht erkennbar.

Die Stirnspalte läuft in seichtem Bogen über die Fühlerwurzeln weg, die Lunula ist daher nur schmal. Die Spaltenäste divergieren stark nach unten und verlaufen eng neben den Facialien und den Augenrändern. Die noch etwas stärker nach unten auseinanderlaufenden, bewimperten Peristomalien bilden mit den Gesichtsleisten etwas unter der Querrinne des Untergesichtes nur ein undeutliches Eck.

Die Wangen sind sehr schmal, die Backen ungefähr ein Fünftel des lotrechten Augendurchmessers breit, mit sanft aufsteigenden Backenleisten und deutlich abgesetzten Backengruben unter den Augen. Der behaarte Hinterkopfsteil der Backen hat im Profile nur eine geringe Breite und Ausdehnung. Der Unterrand des Kopfes ist fast wagrecht.

Fühler geneigt, fast etwas länger als das Untergesicht, an den Wurzeln weiter als ein Drittel der dortigen Stirnbreite von einander entfernt und weit unterhalb der Augenmitte inseriert. Erstes Glied derselben kaum sichtbar, zweites kurz, oben mit einer abstehenden Borste, drittes lang oval, oben gerade, unten konvex, am Ende abgerundet, circa zweimal so lang wie breit. Arista basal, nackt, dünn, an der Basis kaum dicker.

Die im Leben ungezeichneten Augen sind etwas schief, fast lotrecht, lang oval. Der Stirnwinkel neben den Fühlern ist ein etwas abgerundeter stumpfer von circa 120°.

Mundöffnung mittelgross. Rüssel kurz und dick, mit breiten Labellen. Taster stark verbreitert, unten beborstet. Prælabrum gross, aber nicht so breit wie bei *Notogramma* und nich den ganzen Mundrand vorne ausfüllend.

Thorax kurz und kräftig. Rücken so lang wie breit, mehr abgerundet, mittelstark gewölbt, mit scharfen Quernahtästen und Suturaldepressionen in der Mitte der Seiten Schildchen ein Viertel des Rückens lang, gewölbt, nackt, durch eine scharfe Querrinne von der Rückenfläche getrennt und etwas über dieselbe emporgerichtet, am Rande abgerundet und mit vier schiefstehenden, fast parallelen Borsten versehen. Mesopleuren diagonal stärker gekrümmt und vorne über den Vorderschenkeln stark eingedrückt.

Beborstung : Grundbehaarung des Rückens kurz, aber ziemlich dicht und unregelmässig stehend. Humerale eine, Notopleurale zwei, Supraalare drei, Dorsozentrale zwei Paare hinten und zwischen dem letzten Paare, ein Paar Præscutellarborsten. Meso- und Sternopleuren behaart, eine starke Mesopleuralborste oben und eine Sternopleurale oben, hinten. Prothorakale deutlich sichtbar.

Beine mittellang, kräftig. Vorderhüften vorne unbeborstet. Vorderschenkel posterodorsal der Länge nach mit zwei Borstenreihen, posteroventral nur an Spitze mit längeren Borsten in einer Reihe besetzt. Mittelschenkel vorne abstehend borstig, hinten lang bewimpert. Hinterschenkel anterodorsal mit einigen Borsten vor der Spitze. Mittelschienen innen mit einem langen Endsporn. Füsse relativ kurz. Klauen und Pulvillen normal.

Hinterleib breit elliptisch, mit fünf sichtbaren Segmenten von fast gleicher Länge, kurzhaarig. Hypopyg klein, ventralwärts versteckt, rundlich. Erstes Glied des Ovipositors etwas breiter als lang, an der Basis so breit wie das fünfte Tergit, trapezförmig, also breit abgestutzt, an den Seiten fast gerade.

Flügel relativ kurz, querbandiert. Kosta gerade. Subkosta allmählich zur Kosta aufbiegend, in der Flügelmitte und in geringem Abstande von der Mediastina mündend, eine nur kurze und kleine Subkostalzelle bildend, wie nackt. Radialis deutlich wellig geschwungen. Die geraden letzten Abschmitte der Cubitalis und Discoïdalis konvergieren kaum merklich gegen die Flügelspitze hin. Queradern gerade, höchstens die hintere schwach gebogen und fast senkrecht, einander ziemlich genähert Die kleine steht jenseits der Flügelmitte und über dem letzten Drittel der Diskoïdalzelle. Die Analzelle ist gross, vorne durch eine im rechten Winkel gebrochene Querader abgeschlossen und unten in einen mittellangen spitzen Zipfel ausgezogen. Die Analader erreicht nicht einmal als Falte vollkommen den Flügelrand. Axillarfalte deutlich. Schulterlappen, Alula und Schüppchen wie gewöhnlich.

Anmerkung. — Siehe die Notiz bei *Notogramma*, Loew.

Geographische Verbreitung der Art. — Eine Art aus Süd-Amerika.

1. *E. caerulea*, Macquart, Dipt. Exot. Suppl. 3, p. 62 (6), t. 7, f. 6 (1847) Brasilien, Peru, Venezuela. (*Ceroxys*). — **Taf. 4, Fig. 80-82.**

caerulea, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 291, t. 2, f. 4 (1867) (*Euphara*); Mon. N. Amer. Dipt. Vol. 3, p. 150, t. 9, f. 4 (1873); Williston, Man. N. Amer. Dipt. (ed. 3), p. 273, f. 18 (1908).

21. Genus NOTOGRAMMA, Loew

Notogramma. Loew, Berl. Ent. Zeitschr. Vol. 11, p. 289 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 148 (1873); Aldrich Cat. N. Amer. Dipt. p. 594 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 278 (1908).

Typische Art : *N. stigma*, Fabricius.

Charaktere. — Kopf breiter als der Thorax, stark von vorne her zusammengedrückt. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 2 : 1, von vorne wie 9 : 16. Die Stirne ist im Durchschnitte ein Drittel des Kopfes breit, geradrandig und verengt sich nur ganz wenig gegen die Fühler zu. Im Profile ist sie stark geneigt, tritt an der Fühlerwurzel kaum merklich über die Augen vor, so dass man von einem Stirnwinkel eigentlich nicht sprechen kann. Die Stirnfläche ist der Länge nach wenig, der Quere nach gar nicht gewölbt, länger als breit und auf der ganzen Stirnstrieme bis hinauf mit ziemlich tiefen, scharfen Hohlpunkten besetzt, also « grubig » oder runzelig-grubig. Ozellen- und Scheitelplatten scharf differenziert. Letztere schmal, bis zur Stirnmitte vorreichend und nach vorne etwas konvergierend, erstere kürzer ; die drei Ozellen bilden wegen der grösseren Entfernung der vordersten Ozelle nur ein gleichschenkeliges Dreieck, das knapp an der scharfen Scheitelkante liegt.

Kopfborsten von mittlerer Stärke. Jederseits auf den Scheitelplatten zwei nach hinten gebogene obere Frontorbitalborsten hintereinander. Hinter der ersten Ozelle ein nach vorne und stark nach aussen gebogenes Ozellarpaar. Innere Scheitelborsten konvergierend, äussere divergierend, in der Verlängerung der Stirnaugenränder stehend. Postvertikalborsten fehlen. Die Stirnstrieme ist verhältnismässig rauh behaart ; die Härchen am Augenrande sind nach aussen gebogen.

Der Hinterkopf ist oben der ganzen Breite nach für den Thorax aussergewöhnlich stark ausgehöhlt, so dass die Scheitelkante scharf von einem zum anderen Auge zieht und der Hinterkopf oben gar nicht über die Augen vortritt ; unten ist er fast flach.

Der Klypeus ist im Profile eine stark konkave Linie, von geringer Länge ; oben unter den Fühlern weicht er zurück, unten tritt er als Epistom wieder deutlich hervor. Der unterste Mundrand ist stark in die Höhe gezogen. Von vorne betrachtet ist der obere Klypeusteil ziemlich eben, ohne Vertiefungen für die Fühler ; das viel breitere Epistom ist stark der Quere nach gewölbt und wird oben durch eine deutliche Querfurche begrenzt.

Die Stirnspalte läuft in einem weiten Bogen über die Fühlerwurzeln hin weg und bildet so eine breite Lunula, die punktiert ist und eine Querleiste hat. Die Spaltenäste parallel mit Facialien und knapp ausserhalb derselben, nach unten hin stark divergierend. Noch etwas stärker divergieren dann die unter der Querfurche sich anschliessenden deutlich bewimperten Peristomalien, so dass der davon eingeschlossene Klypeus unten eine ansehnliche Breite erhält. Vibrisseneck undeutlich erkennbar.

Die Wangen sind von geringer Breite, die Backen circa ein Drittel der lotrechten Augenhöhe breit, mit steil aufsteigenden Backenleisten und deutlichen runzligen und nackten Backengruben unter dem Auge Der haarige Hinterkopfsteil der Backen ist im Profile nur schmal sichtbar. Unten sind die Backen nirgends herabgesenkt.

Fühler stark geneigt, etwas länger als das Untergesicht, an den Wurzeln weiter als ein Drittel der dortigen Stirnbreite von einander entfernt und weit unterhalb der Augenmitte inseriert. Basalglieder kurz, das erste ist grösstenteils versteckt ; das zweite sichtbar, oben mit einer abstehenden Borste versehen ; das dritte ist lang oval, oben fast gerade, unten etwas konvex, am Ende abgerundet, dreimal so lang wie breit. Arista basal, nackt, an der Wurzel etwas dicker.

Die im Leben einfärbig ungezeichneten Augen sind lang oval, fast lotrecht, nur etwas schief gestellt. Das Augeneck neben den Fühlern ist ein scharfes und geradschenkeliges von weniger als 120°.

Mundöffnung gross und breit, vorne am emporgezogenen Mundrande durch das hohe und breite, schildartig vortretende Prælabrum abgeschlossen. Rüssel kurz, aber sehr dick. Taster stark verbreitert, unten borstlich.

Thorax kurz und plump, macht einen rundlichen Eindruck. Rücken quadratisch, gewölbt, ohne merklich hervortretende Beulen, mit schwach eingedrückten Quernahtästen, auffallend weit vor der Mitte des Rückens, und ebenfalls seichten Suturaldepressionen. Gleichfalls eigentümlich ist der

Anschluss des Schildchens, das ohne tieferen Einschnitt gleichsam eine Fortsetzung der Rückenfläche bildet. Es ist fast länger als ein Drittel des Rückens, breit, halbkreisförmig, oben nackt und flach und am Rande scharf. Die Pleuren sind ebenfalls ziemlich gleichmässig gewölbt.

Die Beborstung und Behaarung ist im Allgemeinen spärlich zu nennen. Da meine Stücke nicht mehr gut erhalten sind, so kann ich darüber keine vollständige Auskunft geben. Ich sehe eine Humerale, zwei Notopleurale, vier schiefe Schildchenborten, einige Mesopleurale oben neben der Naht und eine Sternopleurale. Die Prothorakale scheint zu fehlen. Ueber die anderen Borsten kann ich keine Angaben machen.

Beine kurz und kräftig. Auch die Schienen und Füsse sind etwas verbreitert, machen wenigstens einen plumpen Eindruck. Vorderhüften vorne unbeborstet, Vorderschenkel posterodorsal mit zwei Reihen mittellanger Borsten, posteroventral gegen die Spitze zu mit längeren Borsten in einer Reihe besetzt. Mittelschenkel hinten lang gewimpert, vorne borstlich. Mittelschienen innen mit einem langen Endsporn. Alle Schienen sind aussen (dorsal) am breiten Ende etwas länger behaart. Klauen und Pulvillen normal.

Hinterleib (♂) kurz, breit elliptisch, mit fünf sichtbaren, ungefähr gleichlangen Tergiten, kurz behaart. Hypopyg klein, kugelig.

Flügel gefleckt, ziemlich breit. Kosta gerade, Subkosta an der jenseits der Flügelmitte liegenden Mündung sanft zur Kosta aufbiegend, sonst fast gerade, mit der kurzen Mediastina ein relativ langes, aber nicht schmales Randmal bildend, nackt. Der letzte Abschnit der Discoïdalis zeigt in der Mitte eine mehr weniger deutliche Krümmung nach aufwärts, wodurch dann die erste Hinterrandzelle entsprechend an der Mündung verengt wird. Die Radialis ist ähnlich wie bei der Gattung *Stictomyia*, Bigot, an der Wurzel der Subkosta stark genähert und im Ganzen sanft zur Kosta hinauf gebogen. Die Queradern sind gerade und senkrecht. Die kleine steht auf der Mitte des Flügels und der Diskoïdalzelle. Die Analzelle ist gros, vorne durch eine im stumpfen Winkel gebrochene Querader abgeschlossen und unten in einen kräftigen, mittellangen Zipfel ausgezogen. Die Analader erreicht nur als Falte den Rand. Axillarfalte deutlich sichtbar. Axillarlappen und Alula normal vorspringend. Schüppchen wie gewöhnlich.

Anmerkung. — Die im Aussehen des Kopfes ziemlich ähnlichen Gattungen *Euphara* und *Notogramma* unterscheiden sich namentlich im Thoraxbau und in der Flügeladerung (Quernaht, Schildchen, Pleuren, Subkosta, Randmal), abgesehen von den in der Tabelle noch angegebenen Merkmalen. Beide Gattungen zeichnen sich durch die lange Stirne und das kurze Untergesicht, sowie durch den von vorne her zusammengedrückten Kopf von anderen aus.

Geographische Verbreitung der Art. — Eine Art aus Mittel- und Süd-Amerika.

1. *N. stigma*, Fabricius, Ent. Syst. Suppl. p. 563 (72) (1798) (*Musca*); Syst. Antl. p. 303 (96) (1805). — Mittel-und Süd-Amerika. **Taf. 3, Fig. 73-75.**

syn. stigma, Wiedemann, Aussereur. zweifl. Ins. Vol. 2, p. 565 (1) (1830) (*Ulidia*); Walker, List Dipt. Brit. Mus. Vol. 4, p. 1059 (1849) (*Ulidia*); Loew, Mon. N. Amer. Dipt. Vol. 3, p. 148, t. 9, f. 5 (1873) (*Notogramma*); Williston, Man. N. Amer. Dipt. (ed. 3), p. 273, f. 17 (1908).

obtusus, Fabricius, Syst. Antl. p. 278 (30) (1805) (*Dacus*).

cimiciformis, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 289, t. 2, f. 3 (1867) (*Notogramma*).

22. Genus STICTOMYIA, Bigot

Stictomyia, Bigot, Bull. Soc. Ent. Fr Vol. 5 (6), p. 166 (1885); V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 377 (1898); Aldrich, Cat. N. Amer. Dipt. p. 594 (1905); Williston. Man. N. Amer. (ed. 3), p 277 (1908).

Typische Art : *S. longicornis*, Bigot.

Originalbeschreibung. — « ♂ ♀. Generis Platystomæ vicinum. Capite paullo disciformi, fronte lata, parum superne concava; genis inferne valde dilatatis; facie recta, bi-callosa, buccula parva; palpis latis, labris parum dilatatis; vertice machrochætis sparsis utriusque vix usque ad medium frontis instructo; pedibus nudis, incrassatis, seta tibiali præapicali parva; calyptris minutis; antennis fere subocularibus, capite multum longioribus, segmentis duobus primis minimis, 3° elongato, angusto, epistomate superante, chæto basali longo et basi brevissime tomentoso, oviducto paullo elongato, depresso, basi dilatato, apice angusto; alis vena prima longitudinali (Rondani) sursum incurva, secunda brevi et pariter forte incurvata, cum prima, vena parva, interposita et obliqua, juncta, haud perspicue spinulosis, 3ª, cum 2ª, vena quadam parva obliqua, similiter juncta, ante apicem alæ terminata, transversali externa versus medium cellulæ discoidalis posita, transversali interna leniter sinuosa, haud obliqua, et, apice quintæ transversaque externa, fere æquidistante, cellula anali basi dilatata et convexa, postea concava, apice valde acuminata, vena anali usque ad marginem alæ ducta, costa paullo spinosula. »

Charaktere. — Kopf breit, etwas breiter als der Thorax und von vorne her zusammengedrückt. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile ungefähr wie 2 : 1, von vorne wie 4 : 5. Die sehr breite Stirn ist fast parallelrandig, nur gegen den Scheitel zu wenig schmäler, im Maximum circa die halbe Kopfbreite breit. Die Augenränder sind nur etwas konkav. Im Profile ist sie stark geneigt und geht ohne Winkel in die Linie der Untergesichtshöcker über, nur wenig vor die Augen vortretend. Die Wangen können aber deutlich gesehen werden. Die Stirnfläche ist in der Mitte kaum merklich konkav, fast eben; die Stirnstrieme ist äusserst kurz behaart; an den Härchenwurzeln liegen Punkte. Scheitelplatte und Ozellendreieck nicht scharf abgegrentz, kurz. Ozellen ganz oben an der Scheitelkante, eng beisammen, ein gleichseitiges Dreieck bildend.

Kopfborsten : Ein Paar nach hinten gebogener Frontorbitalborsten jederseits ganz oben. Die vordere Borste ist schwächer und etwas einwärts gerückt, die hintere steht in der Höhe der ersten Ozelle. Hinter dieser Ozelle ist das nach oben gebogene kräftige Ozellarpaar inseriert. Das innere Vertikalpaar konvergiert, das äussere divergiert und steht in einer Reihe mit den Postokularcilien in der Verlängerung der Stirnaugenränder. Das aufgerichtete, mittelstarke Postvertikalpaar steht ganz knapp hinter der Scheitelkante.

Der Hinterkopf ist hinter der sehr scharfen Scheitelkante ausserordentlich stark für den Thorax konkav ausgehöhlt. Hintere Augenränder sehr schmal. Unterer Hinterkopf flach.

Der Klypeus ist im Profile gleich unter den Fühlern in Form eines abgerundeten Höckers weit über die Facialien vorgewölbt und weicht unter der Mitte zum schmalen, wenig vortretenden Epistom zurück. Von vorne betrachtet, nimmt die genannte Konvexität die ganze Klypeusbreite ein. An ihrer höchsten Stelle liegen zwei, durch eine sehr seichte Längsvertiefung getrennte, glänzende, halbkugelige Beulen, gerade unter den Fühlerwurzeln. Zwischen den Beulen und dem Mundrande befindet sich eine Querrinne. Vertiefungen für die Fühler fehlen ganz. Der Umriss des ganzen Klypeus ist ein quadratischer. Seine Breite ist wenig kleiner als die der Stirne zwischen den Fühlern.

Die Stirnspalte zieht im flachen Bogen von einer Fühlerwurzel zur anderen und erzeugt dadurch nur eine schmale Lunula. Die Spaltenschenkel laufen unmittelbar neben den Gesichtsleisten, parallel wie diese nach abwärts und enden unter den Beulen des Klypeus, neben der Querrinne. Neben letzterer stossen die von unten ein kurzes Stück aufsteigenden bewimperten Backenleisten in einem kaum merklichen, abgerundeten Eck mit den Facialien zusammen.

Die Wangen sind von vorne wenig, im Profile deutlich zu sehen. Die Backen sind die Hälfte des lotrechten Augendurchmessers breit, nicht vorgequollen, aber etwas herabgesenkt. Sie werden zum grössten Teile vom unteren Hinterkopf gebildet; Backengruben nicht deutlich differenziert.

Fühler ganz aussergewöhnlich lang und schmal, vorgestreckt, an den Wurzeln entfernt von einander, in den Stirndritteln inseriert. Alle drei Glieder deutlich sichtbar. Erstes und zweites Glied ungefähr gleichlang, letzteres oben mit einer basalen, abstehenden Borste. Drittes Antennenglied gerade, circa viermal so lang wie die beiden Wurzelglieder zusammen, von linearer Gestalt Gegen das Ende zu wird es etwas schmäler. Arista basal, nackt, in der Wurzelhälfte etwas stärker. Herabgedrückt würden die Fühler den Mundrand weit überragen. Im Profile sind sie nur wenig über dem unteren Augenrande inseriert.

Die Augen sind im Leben querbandiert und lotrecht oval. Im Profile erscheinen sie viel höher als breit. Neben den Fühlern biegen die Augenränder nach hinten um, ohne einen Winkel zu bilden.

Mundöffnung klein. Mundrand vorne etwas in die Höhe gezogen. Prælabrum gross, knopfig. Rüssel kurz und plump, Taster verkürzt, aber breit, an der Spitze und unten borstig.

Thorax von der Seite gesehen hoch, der Rücken aber im Verhältnis zum Kopfe klein, quadratisch, eckig. Rücken ziemlich flach; Quernahtäste vor den Seitenmitten. Pleuren gleichmässig flach gewölbt. Schildchen länger als ein Drittel des Rückens, fast halbkreisförmig, hinten nur etwas zugespitzt, oben nackt, abgeflacht, in gleicher Ebene mit dem Rücken liegend.

Beborstung : Grundbehaarung des Rückens kurz, in Längsreihen geordnet. Humerale eine, Notopleurale zwei, Supraalare drei, zwei Paar Dorsozentrale hinten, ein Paar Præscutellare, vier schief stehende, fast parallele Schildchenborsten.

Pleuren : Meso- und Sternopleuren behaart. Längs der Naht einige Mesopleuralborsten. Eine Sternopleuralborste oben, hinten. Prothorakalborste deutlich entwickelt.

Beine kräftig, von normaler Länge. Vorderhüften lang, vor dem Ende beborstet. Hinterhüften aussen mit zwei Borsten. Vorderschenkel mit Borstenreihen posterodorsal und einer Reihe stärkerer Borsten posteroventral. Hinterschenkel nur anterodorsal vor der Spitze mit einigen Börstchen. Alle Schienen vor der Spitze mit einer deutlichen Præapikalborste. Mittelschienen innen mit einigen Endspornen. Füsse lang und stark, besonders die vordersten, an welchen der breite, seitlich komprimierte Metatarsus auffält. Klauen und Pulvillen normal.

Hinterleib breit eliptisch, von der Länge des Thorax, mit fünf sichtbaren Segmenten von ziemlich gleicher Länge, überal nur kurz behaart. Hypopyg klein, kugelig. Erstes Glied des Ovipositors trapezförmig, etwas länger als breit, an der Spitze abgestutzt, vom Hinterleibe abgesetzt.

Flügel kurz, breit und an der Spitze abgerundet, braun, hell punktiert. Kosta vorne gerade. Subkosta gegen die Mündung zu allmählich zur Kosta aufbiegend, beiläufig in der Flügemitte mündend. Dem Endteile derselben ist der Wurzelteil der Radialis ausserordentlich stark genähert, fast bis zur Berührung, und die aus diesem Teile der Subkosta entspringende Falte, welche sich gewöhnlich basalwärts bis zur Gabelung der zweiten und dritten Langsader hinzieht, ist hier besonders stark, fast aderartig chitinisiert. Die Bifurkation erfolgt unter dem Ende der Mediastina und dort erscheint die Subkosta sogar wie unterbrochen. Auch die sonst gerade, vollständige Mediastina endet über dieser Stelle, welche mit der Kosta durch eine steil aufwärtsgehende Querfalte verbunden ist, ohne die Kosta als Ader zu erreichen. Die Mündungsform der Mediastina ähnelt also sehr den Tephritinen. Die Subkosta ist sonst nackt. Die Radialis begleitet zunächst die Subkosta, biegt dann um und läuft der Kosta fast parallel. Cubitalis kaum gebogen. Letztes Stück der Discoïdalis etwas wellig aufgebogen, so dass die erste Hinterrandzelle an der Spitze merklich verengt wird. Kleine Querader senkrecht, über der Mitte der Diskoïdalzelle stehend. Hintere Querader wenig schief stehend, sehr schwach S-förmig geschwungen. Die Analzelle ist unten in eine lange, kräftige Spitze ausgezogen, welche so lange wie der restliche Teil der Analader ist. Die Analader erreicht nur als Falte den Flügelrand. Axillarfalte deutlich. Schulterlappen und Alula normal, ebenso das Thoraxschüppchen.

Anmerkung 1. — *Stictomyia punctata*, Coquillett kenne ich selbst nicht. Herr Kollege E. T. Cresson

in Philadelphia war aber so liebenswürdig, mir die zwei Zeichnungen und die unten folgenden Mitteilungen über diese Art zukommen zu lassen, wofür ich ihm verbindlichst danke.

Aus denselben geht hervor, dass *S. punctata* durch verschiedene Merkmale (*Kopfform*, fehlende Stirnbeborstung, Form der hinteren Querader und Analzelle u. s. w.) nicht unwesentlich vom Gattungstypus abweicht. Ich neige daher zur Ansicht, dass wir in dieser Species einen neuen Gattungsrepresentanten vor uns haben.

Cresson schrieb mir :

« *A few characters of* Stictomyia punctata, *Coquillett, not mentioned in the typical description.*

» Head when seen from front nearly round, or slightly wider than high; occiput concaved, with posterior orbits sharp and narrow. Front about one-half as wide as head, not depressed; inner, outer and post-vertical bristles present; front and face with minute hairs each arising from a black dot. Thoracic bristles : one pair post-acrosticals, one post-dorsocentral, one post-intraalar, one post-alar, one supraalar, two notopleurals, one humeral, two mesopleurals on posterior margin, one sternopleural, one small propleural. Scutellum flat semicircular with four marginal bristles.

» General build, form of vertex, occiput, scutellum and legs, very similar to *longicornis*, Bigot, but shape of head is very different. »

Anmerkung 2. — Es ist nicht zu leugnen, dass *Stictomyia longicornis*, Bigot, unter den Ulidiinen eine ganz isolierte Stellung einnimmt. Schon der blosse Gesamteindruck ist ein ganz exceptioneller. Dazu kommen bei näherer Betrachtung folgende Eigenheiten : die wagrecht vorgestreckten langen Fühler, mit den ungewöhnlich langen Wurzelgliedern und dem linear verlängerten dritten Gliede, das beulige Untergesicht, die kurzen Taster, der plumpe, im Profile so hohe und der Länge nach verkürzte Thorax, die Præapikalborsten an allen Schienen und endlich die Tephritinen-artige Mündung der Mediastina.

Keine der übrigen Gattungen der Ulidiinen zeigt zu ihr merkliche nähere Verwandtschaftsbeziehungen. Aldrich und Cresson reihten sie zuerst bei dieser Ortalidinen-Gruppe ein, der Loew'schen Formel folgend, und ich lasse ihr vorläufig diesen Platz.

Geographische Verbreitung der Arten. — Zwei Arten aus Mittel- und Nord-Amerika.

1. *S. longicornis*, Bigot, Bull. Soc. Ent. Fr. Vol. 5 (6), p. 166 (1885). — Mexico und Neu-Mexico. **Taf. 4, Fig. 89 ; Taf. 3, Fig. 90.**
   longicornis. V. d. Wulp, Biol. Centr. Amer. Dipt. Vol. 2, p. 380, t. 10, f. 5 *a*, *b*, *c* (1898); Cresson, Trans. Amer. Ent. Soc. Vol. 32, p. 284 (1906); Hendel, Wien. Ent. Zeit. Vol. 28, p. 268 (1909).
2. *S. punctata*, Coquillett, Journ. New York Ent. Soc. Vol. 8, p. 23 (1900). Neu-Mexico. **— Taf. 2, Fig. 91, 92.**

23. Genus Œdopa, Loew

Œdopa. Loew, Berl. Ent. Zeitschr. Vol. 11, p. 287 (2) (1867); Mon. N. Amer. Dipt. Vol. 3, p. 146 (2) (1873); Aldrich, Cat. N. Amer. Dipt. p. 594 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 277 (1908).

Typische Art : *Œ. capito*, Loew.

Charaktere. — Kopf auffallend gross, voluminös, merklich breiter als der Thorax. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 18 : 13, von vorne wie 5 : 7. Die parallelrandige Stirne ist aussergewöhnlich breit, breiter als der halbe Kopf, sanft gewölbt, fast eben. Im Profile

ist sie geneigt, tritt am Vorderrande deutlich über die Augen vor, so dass auch die Wangen gesehen werden können, und bildet mit dem Klypeusprofil einen stumpfen Stirnwinkel. Die Stirne ist auf der ganzen Fläche gleichmässig kurz, aber ziemlich dicht behaart; die Behaarung endet oben genau an der Linie, die durch die hinteren zwei Ozellen geht. Die Wurzeln der Härchen stehen kaum etwas vertieft. Scheitelplatten nicht sichtbar abgegrenzt, sehr kurz. Ozellen ganz oben am Scheitelrande, einander stark genähert, im gleichseitigen Dreieck stehend.

Kopfborsten: Je eine kurze obere Frontorbitalborste, nach hinten gebogen, ganz oben, in der Höhe der vorderen Ocelle; häufig eine zweite, schwächere Borste davor. Ein mittelgrosses Ozellarborstenpaar hinter der ersten Ozelle inseriert, nach oben und aussen divergierend. Innere Scheitelborsten stark nach einwärts gerückt, konvergierend; äussere in der Verlängerung der Augenränder stehend, nach aussen gebogen, in der Fortsetzung der hinteren Augenrandwimpern. Das Postvertikalpaar steht in geringer Entfernung hinter den Ozellen. Die Scheitelborsten stehen mit dem Postvertikalpaar auf einem abgeschrägten nackten Querstreifen am Scheitel, der geneigt hinter der borstlichen Stirne liegt, aber selbst erst mit noch schärferer Kante gegen den stark ausgehöhlten Hinterkopf abfällt. Da dieser Querstreifen nicht breit ist, ist auch der Hinterkopf nicht hinter den Augen vorgequollen, wie es bei den *Timia*-Arten der Fall ist. Oberer Hinterkopf ziemlich ausgehöhlt, unterer fast eben, flach. Die Zerebralnähte stark ausgeprägt.

Klypeus im Profile oben ungefähr senkrecht und fast gerade, unter der Mitte konvex gegen den Mundrand zurückweichend. Seine Fläche ist der Quere nach merklich gewölbt, unter den Fühlern sanft ausgehöhlt, ohne begrenzte Fühlergruben anzudeuten. Der Mundrand ist etwas hinaufgezogen und das gewölbte Epistom über demselben mit einigen Querrunzeln versehen. Die Umgrenzung des Klypeus ist fast quadratisch, etwas breiter als hoch, so breit wie zwei Drittel der Stirnbreite neben den Fühlerwurzeln. Im Profile tritt der Klypeus über die Facialien sichtbar vor.

Die Stirnspalte geht geradlinig von einer Fühlerwurzel zur entfernten anderen, so dass nur zwischen und unter den letzteren eine schwach gewölbte Lunula zu sehen ist. Die Spaltenschenkel biegen aussen neben den Fühlern rechtwinkelig um und laufen geradlinig und unmittelbar neben den zu einander parallelen Facialien etwa bis zur Mitte des ganzen Untergesichtes nach abwärts. Die gut differenzierten Gesichtsleisten stossen neben den eben erwähnten Stirnspaltenenden mit den von unten aufsteigenden Backenleisten in einem sehr stumpfen Winkel zusammen, so dass ein Vibrisseneck etwas unter der Klypeusmitte kaum angedeutet ist.

Die Wangen sind neben den Fühlern ungefähr ein Drittel des Klypeus breit, sind aber auch absolut sehr breit zu nennen. Die aussergewöhnlich breiten Backen verleihen dem Kopfe das blasige Aussehen und sind zwei Drittel des lotrechten Augendurchmessers hoch. Die Backengruben sind nicht deutlich abgegrenzt und höchstens als nackter Raum zwischen Spaltenast und Augenrand erkennbar. Der weitaus überwiegende Teil der Backen wird durch den zart und kurz behaarten, nach vorne umgebogenen Hinterkopfsteil gebildet. Derselbe ist nach hinten zu weder vorgequollen, noch herabgesenkt. Die Peristomalien sind zart gewimpert.

Die Fühler sind sehr kurz und geneigt, weit von einander entfernt. Das erste Glied derselben ist wenig sichtbar; das zweite ist kurz, oben mit einer abstehenden Borste versehen. Das dritte ist scheibenförmig rund, reicht kaum unter den unteren Augenrand hinab und trägt basal die dünne, nackte, an der Wurzel etwas spindelartig verdickte Arista. Die Fühler sind unter der Augenmitte inseriert.

Die im Leben mit zwei parallelen, purpurnen Querbinden versehenen Augen liegen etwas schief; ihr vertikaler und wagrechter Durchmesser ist ziemlich gleich lang. Das Augeneck neben den Fühlern ist bogig abgerundet.

Mundöffnung klein, wenig vertieft, wie ausgepolstert. Rüssel klein, schwach; Labellen zurückgeschlagen. Taster jenseits der Mitte etwas verbreitert, unten der ganzen Länge nach beborstet.

Prælabrum auf der Vorderseite konkav, klein und schmal, aber deutlich vortretend. Im Profile steht es frei nach unten ab, da es nur oben mit dem wenig sichtbaren hufeisenförmigen Fulcrum verwachsen zu sein scheint Beiderseits neben dem schildförmigen Prælabrum unter dem Mundrande sind Wülste sichtbar, welche aus der inneren Mundhöhlenhaut hervortreten.

Thorax plump. Rücken eckig, quadratisch, mässig gewölbt, vorne stark abschüssig. Quernahtäste vor der Mitte.

Pleuren ziemlich gleichmässig gewölbt. Schildchen ein Drittel des Rückens lang, eiförmig zugespitzt, in der Rückenebene liegend, oben dreieckig abgeflacht, eben und nackt.

Beborstung : Grundbehaarung des Thoraxrückens kurz, aber ziemlich dicht stehend, zum grössten Teile in Längsreihen geordnet. Humerale eine, Notopleurale zwei, Supraalare drei, ein Paar Dorsozentrale ganz hinten, ein Paar Præscutellarborsten. Vier schiefstehende, fast parallele Schildchenborsten.

Pleuren : Meso- und Sternopleuren behaart. Längs der Naht auf den Mesopleuren eine Reihe von Börstchen; nur oben ein bis zwei längere Borsten. Eine Sternopleuralborste oben, hinten. Prothorakale gut entwickelt.

Beine mittellang, kräftig. Vorderhüften mittelstark, vorne nur ganz unten beborstet. Hinterste Hüften aussen mit zwei Borsten. Vorderschenkel posterodorsal mit zwei Längsreihen, posteroventral mit einer Reihe etwas stärkerer Borsten besetzt. Mittelschenkel posterior und posteroventral in der Spitzenhälfte mit einer Längsreihe kurzer Börstchen. Hinterschenkel anterodorsal mit einigen Börstchen. Mittelschienen ventral an der Spitze mit Dornen bezetzt, wovon zwei bis drei länger sind. Hinterschienen etwas gebogen.

Hinterleib eiförmig zugespitzt, nicht schlank, von der Länge des Thorax, mit fünf sichtbaren Segmenten. Das fünfte Segment ist gegen die übrigen, namentlich beim ♂, stark verlängert. Das Hypopyg ist sehr klein und von der Spitze des Abdomens etwas entfernt. Das erste Glied des Ovipositors ist etwas länger als breit, trapezförmig mit wenig konvexen Seiten, an der Spitze breit abgestutzt, an der Wurzel so breit wie der letzte Ring. Behaarung des Hinterleibs wie bei *Paroedopa*.

Flügel mit normalem Umriss; glashell, am Vorderrande mit dunklen Makeln. Kosta vorne gerade. Subkosta fast gerade, weit jenseits der Flügelmitte in die Kosta mündend, nackt. Mediastina allmählich zur Kosta aufbiegend, eine mittelgrosse, schlanke Subkostalzelle bildend. Radialis und Cubitalis fast gerade. Letzter Abschnitt der Discoïdalis hinter der Mitte deutlich wellig aufgebogen, so dass die erste Hinterrandzelle an der Spitze etwas verengt wird. Kleine Querader schiefstehend, etwas vor der Mündung der Subkosta, aber jenseits der Mitte der Diskoïdalzelle. Hintere Querader S-förmig geschwungen, stark schiefliegend, jenseits der Mitte der ersten Hinterrandzelle mündend (manchmal mit einem Aderanhang in der Mitte). Analzelle gross und lang, mit kräftigem keilförmigen Zipfel, der länger ist als der restliche Spitzenteil der Analader. Die vorne abschliessende Querader ist stumpfwinkelig gebrochen. Die Analader erreicht nur als etwas nach hinten gebogene Falte den Flügelrand. Axillarfalte deutlich. Schulterlappen stark ausgebildet, vorspringend. Alula relativ gross. Thoraxschüppchen normal.

Anmerkung. — *Œdopa* und *Paroedopa* bilden durch mehrere Eigentümlichkeiten eine eigene Gruppe unter den Ulidiinen. Diese Merkmale sind : der etwas aufgeblasene Kopf mit dem konvexen Klypeus ohne Fühlergruben und dem zurückweichenden Mundrande, die aussergewöhnlich kleinen Fühler und Mundteile, die breiten Backen und die matte grauliche Färbung.

Die Gattung *Œdopa*, Loew, hat aber auch eine ganz vereinzelt dastehende Bildung des Prælabrums, wie ich sie sonst nirgends gefunden habe.

Geographische Verbreitung der Arten. — Drei Arten aus Nord- und Mittel-Amerika.

1. *Œ. ascriptiva*, Hendel, Wien. Ent. Zeit. Vol. 28, p. 267 (1909). — Nord-Amerika.
Taf. 4, Fig. 83; Taf. 3, Fig. 84.
2. *Œ. capito*, Loew, Berl. Ent. Zeitschr. Vol. 11, p. 287, t. 2, f. 2 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 146, t. 9, f. 1-3 (1873).
capito, Snow, Univ. Sc. Bull. Vol. 2, p. 219 (1903); Cresson, Trans. Amer. Ent. Soc. Vol. 32, p. 284 (1906). Nord-Amerika.
3. *Œ. elegans*, Giglio-Tos. Boll. Mus. Zool. Univ. Torino, Vol. 8, nº 158, p. 12 (1893); Ditteri del Messico, Vol. 4, p. 42 (1895). Mexico.

24. Genus PARŒDOPA, Coquillett

Parœdopa. Coquillett, Journ. New York Ent. Soc. Vol. 8, p. 22 (1900); Aldrich, Cat. N. Amer. Dip. p. 594 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 277 (1908).

Typische Art : *P. punctigera*, Coquillett.

Originalbeschreibung. — « Near *Œdopa*, but with the head much narrower. Head, viewed in front, scarcely broader than high, front only slightly wider than either eye, with rather large punctures, face slightly retreating below, cheeks about half as wide as the eye-height, antennæ slightly over half as long as the face, the first two joints very short, the third ellipsoidal; only slightly longer than wide; thorax bearing two pairs of dorsocentral bristles and one of acrostichals, one sternopleural but no propleural bristles, scutellum flat above, bearing four marginal bristles; abdomen ovate; first vein of wings bare, hind angle of anal cell prolonged in a lobe which is as long as the cell proper, small cross-vein near middle of discal cell and nearly midway between apices of auxiliary and first veins, third and fourth veins noticeably converging toward their apices. »

Charaktere. — Kopf gross und breit, aber nicht so voluminös wie bei *Œdopa*, etwas breiter als der Thorax. Der lotrechte Kopfdurchmesser verhält sich zum wagrechten im Profile wie 16 : 9, von vorne wie 4 : 5. Die Stirne wird nach vorne um ein Geringes breiter, ist im Mittel so breit wie die halbe Kopfbreite und hat schwach konvexe Seiten; namentlich am Scheitel konvergieren die Augenränder merklich. Ihre Fläche ist der Quere nach sanft, der Länge nach aber ziemlich stark gekrümmt. Im Profile tritt sie weniger über die Augen vor als bei *Œdopa* und ist vorne so stark geneigt, dass sie mit der Klypeusfläche einen ausserordentlich stumpfen Winkel bildet. Die Stirne ist auf ihrer ganzen Fläche, mit Ausnahme der Ozellenumgebung, gleichmässig kurz und zart, aber ziemlich dicht behaart. Die Härchenwurzeln sind nicht vertieft. Scheitelplatten nicht sichtbar abgegrenzt. Ozellen ganz oben am Scheitelrande, nicht so stark genähert wie bei *Œdopa*, sondern in normaler Entfernung ein gleichseitiges Dreieck bildend.

Kopfborsten : Zwei nach hinten gebogene Frontorbitalborsten jederseits ganz oben. Das obere, etwas stärkere Paar steht in der Höhe der Ozellarborsten, das vordere etwas vor der vordersten Ozelle. Das mittelstarke Ozellarborstenpaar steht hinter der ersten Ozelle und ist nach oben gebogen. Innere Scheitelborsten normal, konvergierend; äussere als Fortsetzung der hinteren Augenrandwimpern kaum etwas ausserhalb der Verlängerung der Augenränder stehend. Das zarte Postvertikalpaar ist in der Verbindungslinie der äusseren Vertikalborsten in geringer Entfernung hinter den Ozellen inseriert. Vertikal- und Postvertikalborsten stehen aber nicht wie bei *Œdopa* auf einem Querstreifen, der sowohl von der Stirne als auch vom Hinterkopf sich durch verschiedene Neigung unterscheidet, sondern auf dem ohne Stufe hinter der Scheitelkante abfallenden Hinterkopfe.

Der Hinterkopf ist oben und in der Mitte viel stärker als bei *Œdopa* für den Thorax ausgehöhlt, die hinteren Augenränder daher ausserordentlich schmal. Unterer Hinterkopf flach.

Klypeus im Profile oben senkrecht und fast gerade, in der Mitte konvex, unten gegen den Mundrand zurückweichend. Seine Fläche ist der Quere nach deutlich gewölbt, in der Mitte sogar flach höckerartig. Unter den Fühlerwurzeln sind seichte Vertiefungen für die Fühler erkennbar. Der Klypeus ist merklich höher als breit, in der Mitte durch die Vibrissenecken etwas verengt; darüber von scheibenförmiger Gestalt, darunter erweitert er sich als Epistom etwas gegen den Mundrand hin. Im Profile tritt er nur von der Mitte abwärts über die Gesichts- und Backenleisten vor. Seine grösste Breite beträgt drei Viertel der Stirnbreite zwischen den Fühlern.

Die Stirnspalte umschliesst hufeneisenförmig gebogen die Fühler, so dass hier auch über den Fühlern im Bogenausschnitte eine Lunula sichtbar wird. Die Spaltenschenkel laufen unmittelbar neben den Facialien kreisförmig bogig nach abwärts und bilden auf diese Art die scheibenförmige Gestalt des oberen oder eigentlichen Klypeus. Die gut erkennbaren Facialien bilden mit den von unten konvergierend aufsteigenden Peristomalien in der Mitte des Klypeus ein letzteren verengendes deutliches Vibrisseneck.

Die Wangen sind neben den Fühlern ungefähr ein Viertel des Klypeus breit Die ausserordentlich breiten Backen sind hinten herabgesenkt und dort die Hälfte des lotrechten Augendurchmessers breit. Die nackten Wangen und Backengruben sind von dem zart behaarten nach vorne umgebogenen unteren Hinterkopfsteil durch eine vom Vibrisseneck fast wagrecht nach hinten gehende Grenzlinie deutlich gesondert. Der Hinterkopf ist unten nicht vorgequollen, aber wie schon gesagt herabgesenkt und schmal. Die bewimperten Backenleisten steigen im Profile nach vorne hin gerade und sehr steil empor.

Die Fühler sind aussergewöhnlich kurz und ziemlich weit von einander entfernt. Die beiden Basalglieder sind so kurz, dass von aussen nur ein kleiner Teil des zweiten Gliedes, mit einem Börstchen am Oberrande, gesehen werden kann. Das dritte Glied ist vollkommen kreisrund. Die basale Arista ist nackt und an der Wurzel etwas spindelförmig verdickt. Die Fühler reichen im Profile kaum bis zum unteren Augenrande herab und sind unter der Augenmitte inseriert.

Die im Leben unbandierten Augen sind lotrecht oval. Im Profile ist ihr lotrechter Durchmesser fast doppelt so lang wie der wagrechte. Das Augeneck neben den Fühlern ist scharf, geradschenkelig, ungefähr 120° gross.

Mundöffnung klein. Rüssel und Taster relativ schwach. Labellen zurückgebogen. Die kurzen Taster sind löffelartig verbreitert, unten beborstet. Prælabrum als Vorderteil des Fulcrums wie normal von vorne deutlich sichtbar, aber nur sehr klein und schmal.

Thorax ziemlich plump. Rücken eckig, quadratisch, mässig gewölbt, vorne abschüssig. Quernahtäste vor den Seitenmitten. Pleuren ziemlich gleichmässig gewölbt. Schildchen ein Drittel des Rückens lang, eiförmig zugespitzt, in gleicher Ebene mit der Rückenfläche liegend, oben trapezförmig abgeflacht, eben und nackt, an der Spitze scharfkantig.

Beborstung : Grundbehaarung des Thoraxrückens kurz und dicht, in Längsreihen geordnet. Humerale eine Notopleurale zwei, Supraalare drei, zwei Paare Dorsozentrale hinten, ein Paar Præscutellarpaarborsten. Vier schiefstehende, fast parallele Scutellarborsten.

Pleuren : Meso- und Sternopleuren behaart. Längs der Naht eine Reihe von Mesopleuralborsten. Eine Sternopleurale oben, hinten. Prothorakale gut entwickelt.

Beine mittellang, kräftig. Vorderhüften kurz, nur ganz unten beborstet. Hinterhüften aussen mit zwei zurückgelegten Borsten. Vorderschenkel posterodorsal mit zwei, posteroventral mit einer Reihe, aber etwas stärkerer Borsten der ganzen Länge nach besetzt. Mittelschenkel mit einer posterioren Reihe von Borsten und einigen Börstchen posteroventral an der Spitze. Auch vorne stehen in der Mitte einige Borsten. Hinterschenkel anterodorsal vor der Spitze mit einigen Borsten. Mittelschienen innen mit einem Kranze längerer und kürzerer Sporne, aussen mit einem præapikalem Dorn. Hinterschienen mässig gebogen, dorsal länger behaart und mit einer mehr weniger deutlichen Præapikalborste.

Hinterleib eiförmig zugespitzt, von der Länge des Thorax, mit fünf sichtbaren Segmenten. Das

fünfte Segment ist im Vergleiche mit den übrigen, namentlich beim ♂, etwas verlängert. Hypopyg klein, kugelig. Das erste Glied des Ovipositors ist ziemlich schlank, fast noch einmal so lang wie breit, mit konvexen Seiten nach hinten zugespitzt, in der Mitte breiter als an der Wurzel, fein abstehend behaart. Behaarung des Abdomens kurz und zart, nur an den hinteren Segmenten einige Borstenhaare am Rande.

Flügel im Allgemeinen wie bei der Gattung *Œdopa*. Der letzte Abschnitt der Diskoïdalader ist aber fast gerade, kaum etwas gebogen und die erste Hinterrandzelle nur ganz wenig an der Spitze verengt. Die hintere Querader ist ganz gerade und steht auf der Discoïdalis ungefähr senkrecht. Der letzte Abschnitt der Discoïdalis ist länger als der vorletzte, während bei *Œdopa* das Umgekehrte der Fall ist.

Anmerkung. — Man vergleiche die Notiz beim Genus *Œdopa*, Loew. Die Unterschiede dieser beiden Gattungen ersieht man am besten beim Vergleiche der Kopfabbildungen im Profile und von vorne. Die Form des Klypeus, der Backen und Augen, der Verlauf der Backen- und Gesichtsleisten, sowie der Stirnspalte und des Prælabrums ist bei beiden grundverschieden. Interessant sind die Præapikalborsten an Mittel- und Hinterschienen.

Geographische Verbreitung der Art. — Eine Art aus Nord-Amerika.

1. *P. punctigera*, Coquillett, Journ. New York Ent. Soc. Vol. 8, p. 23 (1900). — Nord-Amerika. **Taf. 4, Fig. 85; Taf. 3, Fig. 86.**
punctigera, Cresson, Trans. Amer. Ent. Soc. Vol. 32, p. 284, t. 6, f. 7 (1906).

25. Genus EURYCEPHALOMYIA, Hendel

Eurycephalomyia. Hendel, Wien. Ent. Zeit. Vol. 26, p. 98 (1907); Williston, Man. N. Amer. Dipt. (ed. 3), p. 389 (1908).

Synonyma : **Eurycephala.** Röder, Berl. Ent. Zeitschr. Vol. 25, p. 211 (1881); Aldrich, Cat. N Amer. Dipt. p. 594 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 277 (1908).

Typische Art : *E. myopaeformis*, Röder.

« Diese Gattung gehört in die Nähe von *Œdopa*, Loew, zu den Ulidiinen und bildet den Uebergang von diesen zu den Ortalinen.

Charaktere. — Kopf auffallend gross. Stirn sehr breit, der obere Teil derselben stark querrunzelig, der untere Teil über den Fühlern mit Hohlpunkten besetzt. Ozellen am Scheitel-Ende ausserordentlich genähert. Fühler länger als wie bei *Œdopa*, von einander entfernt, das dritte Glied derselben länglich und mit nackter am Anfange verdickter Borste. Stirnspalte fast geradlinig von Fühler zu Fühler laufend, kein Stirnmöndchen, über den Fühlern aber die Stirn ein wenig eingedrückt. Gesicht breit, etwas gewölbt, unter jedem Fühler eine Fühlergrube, welche an dem seitlichen Mundrand als Rinne herabläuft. Die Mitte zwischen beiden Fühlergruben ist leistenartig erhoben. Augen rund und klein, nicht die Mitte der Kopfhöhe erreichend. Backen sehr breit, überhaupt das ganze Untergesicht wie aufgeblasen, oberhalb zwischen Augen und Fühler mit Quereindrücken. Klypeus hufeisenförmig den Rüssel umschliessend, aber nicht aufgeworfen. Der Rüssel von mittelmässiger Grösse. Thorax nur hinten beborstet, das Schildchen nur sehr wenig gewölbt, vierborstig.

Flügel : erste Längsader unbehaart. Der letzte Abschnitt der vierten Längsader ist gegen sein Ende nur sehr wenig aufgebogen, die dritte Längsader konvergiert mit der vierten daher nur sehr wenig. Hintere Querader gerade. Der Zipfel der Analzelle ist nur sehr wenig ausgezogen. Der ganze Körper ist nur sehr dünn und schwach behaart ».

Type : *E. myopaeformis*, Röder, loc. cit. p. 212.

« Nigricans, fronte picea, epistomate stramineo, buccato. Thorace nigro levissime griseo-striato, abdomine nigro nitido. Pedibus nigris, genibus tarsisque stramineis. Long. 2 1/2 lin. Patria : California. ♂ ♀. »

« Stirne sehr breit, schwarz, querrunzelig, sehr dünn behaart. Backen aufgeblasen mit Quereindrücken neben den Augen. Fühler getrennt, dunkelbraun, mit einer Stirnspalte von Fühler zu Fühler laufend und je mit einer Fühlergrube, welche durch einen leistenartig erhobenen Rand getrennt ist. Die gelbe Farbe des Untergesichtes geht bis etwas über die Fühler hinaus. Thorax schwarz, schwach grau gestreift. Schildchen schwarz, vierborstig. Hinterleib glänzend schwarz. Das ♀ hat eine Legeröhre, welche gerinnt ist. Beine schwarz, mit strohgelben Knien und Tarsengliedern, die allmählich nach dem Ende zu dunkler werden. Flügel gelblich tingiert, an der Basis mit einem dunklen Fleck, ein zweiter Fleck vor dem Randmal bis zur vierten Längsader. »

26. Genus SEOPTERA, Kirby

Seoptera. Kirby & Spence, Introd. to Entom. Vol. 2, p. 305 (1817); Einleit. in die Entom. Vol. 2, p. 344 (Deutsche Ausgabe, Stuttgart, 1824); Loew, Berl. Ent. Zeitschr. Vol. 11, p. 295, pl. 2, f. 6 (1867); Mon. N. Amer. Dipt. Vol. 3, p. 151, pl. 9, f. 6 (1873); Aldrich, Cat. N. Amer. Dipt. p. 595 (1905); Williston, Man. N. Amer. Dipt. (ed. 3), p. 278 (1908).

Synonyma : **Myodina**, Robineau-Desvoidy. Essay s. l. Myod. p. 727. (19) (1830); Schiner, Fauna Austr. Vol. 2, p. 84 (1864); Röder, Berl. Ent. Zeitschr. Vol. 25, p. 209 (1881); Becker, Kat. Paläarkt. Dipt. Vol. 4, p. 105 (1905).

Typische Art : *S. vibrans*, Linné.

Kirby schreibt loc. cit. 1824, im 23. Briefe, Folgendes : « Sie haben wahrscheinlich eine sehr gemeine glänzend schwarze Mücke mit einem schwarzen Fleck am Flügelende bemerkt, die Zittermücke (*Tephritis vibrans*, Latreille, *Seioptera*, Kirby MS.); sie hat ihren Beinamen von dem anhaltenden Zittern ihrer Flügel im ruhenden Zustande erhalten. »

Eine Charakteristik der Gattung hat Kirby damit freilich nicht gegeben, doch weiss jedermann, was er meint.

Eine solche finden wir zuerst bei Robineau-Desvoidy, der das Genus mit dem Satze « une arête sur le milieu de la face » ganz genügend kennzeichnet.

Charaktere. — Kopf mittelgross, ungefähr so breit wie der Thorax. Der lotrechte Durchmesser verhält sich zum wagrechten im Profile wie 6 : 5, von vorne wie 9 : 10. Die parallelrandige Stirne ist ein Drittel des Kopfes breit, merklich gewölbt — Loew sagt « etwas aufgetrieben » —, im Profile mittelmässig geneigt und an den Fühlerwurzeln ohne scharfen Stirnwinkel stumpf in die abfallende Linie des Untergesichts übergehend. Ihre Fläche ist auch der Quere nach deutlich gewölbt und überall dicht fein und kurz behaart. Die Scheitelplatten sind oben am Augeneck als kurze breite Dreiecke unterscheidbar, das kleine Ozellendreieck liegt ganz oben am Scheitel und trägt die drei in einem gleichseitigen Dreieck aufgestellten Ozellen. Die von den Wangen auf die Stirne aufsteigenden, nach oben sich verjüngenden Wangenplatten am Augenrande zeichnen sich durch ihre Nacktheit und die weisse Bestäubung aus.

Kopfborsten : Am Vorderrande jeder Scheitelplatte eine kleine, nach vorne und aussen gebogene Borste, die für eine obere Frontorbitalborste gehalten werden kann. Ozellarborsten klein, hinter der ersten Ozelle, nach vorne stark divergierend. Innere Vertikalborsten konvergierend, etwas innerhalb

der Verlängerung der Stirnaugenränder, äussere divergierend, etwas ausserhalb derselben. Postvertikalpaar schon hinter der Scheitelkante stehend, mit einer Krümmung nach vorne.

Der Hinterkopf ist hinter der abgerundeten Scheitelkante merklich konvex, ebenso über die hinteren Augenränder erhaben, nur unten in der Mitte flacher.

Klypeus im Profile fast gerade und lotrecht abfallend, nur mit einer Neigung zur Konkavität; von einer Querrinne also keine Spur. Mundrand nur wenig hinauf gezogen. Von vorne betrachtet zeigt sicht der wesentlichste Gattungscharakter, nämlich ein abgerundeter Längskiel, der zwischen den Fühlern beginnt und unten sich verbreiternd in den Mundrand oder das Epistom übergeht. Beiderseits desselben ziehen unter den Fühlern und neben den Facialien deutliche Längsrinnen — keine abgegrenzten Gruben wie bei *Timia* oder *Ulidia*, in denen die Fühler halb versteckt inseriert sind — bis zum Vibrisseneck oder der oberen Grenze des Epistoms herab. Der Mundrand tritt nicht vor. Im Profile ist die Längsleiste deutlich über die Gesichtsleisten vortretend sichtbar.

Die Stirnspalte zieht in einem hohen Bogen über die Fühlerwurzeln hinweg, erzeugt also eine grosse Lunula, und sendet mit dem Augenrande parallele, nach unten mässig divergierende Spaltenäste nach abwärts, die auch in geringer Entfernung ausserhalb der Facialien verlaufen. Letztere zeigen ebenfalls nur eine geringe Divergenz nach unten und bilden in geringer Höhe über dem unteren Mundrande mit den kurz bewimperten, von unten steil aufsteigenden Backenleisten ein von vorne und auch von der Seite nur wenig auffallendes Vibrisseneck.

Die Wangen sind neben den Fühlern von geringer Breite, die Backen nur schmal, circa ein Sechstel des lotrechten Augendurchmessers hoch. Ihr Unterrand ist gerade. Die Backengruben sind unter dem Auge gut differenziert.

Fühler geneigt, mittellang, aber durch ihre Breite gross erscheinend; an den Wurzeln ungefähr in den Stirndritteln inseriert. Die beiden Wurzelglieder sind sehr kurz, das erste kaum sichtbar, das zweite oben wohl borstlich, aber ohne eigentliche abstehende Borste. Das dritte Glied ist sehr gross, breit elliptisch, das Verhältnis der Breite zur Länge ungefähr 3 : 5; es erreicht den Mundrand nicht. Die basale Arista ist nackt und verjüngt sich allmählich zur Spitze hin. Im Profile stehen die Fühler der Augenmitte gegenüber.

Die im Leben ungezeichneten Augen sind lotrecht länglich oval. Die Augenränder neben den Fühlern bilden einen wenig auffallenden, abgerundeten und sehr stumpfen Winkel.

Mundöffnung mittelgross. Rüssel dick, mit gewölbtem hornigen Kinne; Labellen relativ kurz. Taster verbreitert, unten borstlich Prælabrum schmal, aber stark vortretend.

Thorax stark. Rücken ein ziemliches Stück länger als breit, im Umriss abgerundet, oben gewölbt, Quernahtäste in den Seitenmitten. Pleuren ziemlich gleichmässig gewölbt, vorne nicht stark eingedrückt. Schildchen kürzer als ein Viertel der Rückenlänge, eiförmig, oben stark gewölbt und von der kurzen Pubeszenz abgesehen, nackt, durch eine tiefe Querfurche getrennt, etwas über die Rückenfläche emporgerichtet, am Rande mit vier schiefen, fast parallelen Borsten besetzt.

Beborstung : Grundbehaarung des Rückens kurz und fein, undeutlich in Längsreihen geordnet. Humerale eine, Notopleurale zwei, Supraalare zwei (die vorderste der gewöhnlichen drei Borsten fehlt), ein Paar Dorsozentrale und ein Paar Præscutellare ganz hinten, in einer Reihe.

Mesopleuren unbehaart und ohne Borsten, Sternopleuren behaart, oben mit zwei aufrechten, etwas an den Leib gedrückten Borsten; die eine wie normal hinter der Mesopleuralnaht, die andere gerade unter derselben. Prothorakale sehr schwach.

Beine relativ lang und schlank. Vorderhüften vorne unbeborstet. Vorderschenkel posterodorsal mit zwei Reihen von Borsten der ganzen Länge nach, posteroventral nur in der Spitzenhälfte mit einer Reihe besetzt. Mittelschenkel posteroventral lang bewimpert. Hinterschenkel anterodorsal vor der Spitze mit ein paar Borsten. Mittelschienen innen mit einem starken Dorn unter einigen kurzen, schwachen. Klauen und Pulvillen normal.

Hinterleib länglich eiförmig, mit fünf sichtbaren Segmenten, wovon das fünfte verkürzt ist. Das Hypopyg ist klein, kugelig und liegt ventralwärts. Das erste Glied des Ovipositors hat von der Seite und von unten betrachtet die Gestalt eines abgestutzten Konus, von oben besehen zeigt es sich als kegelförmige Rinne, so stark sind die Ränder des oben bei anderen Gattungen sonst fast flachen oder seicht hohlen Gliedes emporgerollt Behaarung des Abdomens kurz und fein.

Flügel im Allgemeinen wie bei *Acrosticta*, Loew, die Längsadern sind gerade, das Randmal spitz und schlank, wenn auch nicht so lang. Die Analzelle hat aber eine andere Gestallt. Die sie vorne abschliessende Querader ist nicht im Winkel gebrochen, sondern nur sanft gebogen und steht steiler, weshalb der Zipfel unten an der Zelle nur ein kurzer, wenig auffallender ist. Man könnte besser sagen, die Zelle hat unten ein « scharfes Eck ». Die Flügelzeichnung beschränkt sich auf Randmal und Spitzenfleck. Die Kosta ist unbehaart, nur mikroskopisch pubeszent.

Anmerkung. — Unsere Gattung weicht in mehrfacher Hinsicht von den anderen Formen der Ulidiinen ab. Die Kopfform und Stirn-Färbung — namentlich der Längskiel des Untergesichtes — erinnern lebhaft an die genuinen Ortalidinen. Die Beborstungsverhältnisse : eine nach vorne gebogene Orbitalborste, nur zwei Supraalare, nackte Mesopleuren und zwei Sternopleuralborsten stehen ganz vereinzelt da. Ebenso ist die Bildung einer konischen Rinne als Basalglied des Ovipositors ganz singulär. Die im Flügelgeäder deutlich ausgeprägte Verwandtschaft mit den Ulidiinen ist aber nicht zu verkennen und bleibt vorläufig ausschlaggebend.

Geographische Verbreitung der Arten. — Zwei Arten aus der paläarktischen Region und aus Nord-Amerika.

1. *S. colon*, Loew, Berl. Zeitschr. Vol. 11, p. 296 (1), pl. 2, f. 6 (1867) (*Seoptera*); Mon. N. Amer. Dipt. Vol. 3, p. 152 (1), pl. 9, f. 6 (1873). — Nord-Amerika.

2. *S. vibrans*, Linné, Syst. Nat. (ed. 10), Vol. 1, p. 599 (86) (1758) (*Musca*); Fauna Suec. (ed. 2), p. 459 (1867) (*Musca*) (1761). — **Taf. 3, Fig. 58, 60; Taf. 4, Fig. 59.** — Europa, Nord-Amerika. Zentral-Asien.

vibrans, Scopoli, Ent. Carniolica, nº 939 (1763) (*Musca*); Fabricius, Spec. Ins. Vol. 2, p. 450 (81) (1781) (*Musca*); Ent. Syst. Vol. 4, p. 350 (158) (1794) (*Musca*); Syst. Antl. p. 324 (39) (1805) (*Tephritis*); Geoffroy, Hist. Abreg. des Ins. Vol. 2, p. 494 (4) (1800) (*Musca*); Schrank, Enum. Ins. Austr. p. 470 (955) (1781) (*Musca*); Fauna Boica, Vol. 3, p. 123 (2459) (*Musca*) (1803); De Geer, Mem. Ins. Vol. 6, p. 17 (11), pl. 1, f. 19, 20 (1782) (*Musca*); Gmelin, Syst. Nat. Vol. 5, p. 2855 (112) (1788) (*Musca*); Latreille, Gen. Crust. Ins. Vol. 4, p. 355 (1809) *Tephritis*); Meigen, Syst. Beschr. Vol. 5, p. 284 (21) (1826) (*Ortalis*); Fallén, Dipt. Suec. Ortal. p. 20 (6) (1830) (*Ortalis*); Macquart, Suites à Buffon, Vol. 2, p. 437 (11) (1835) (*Ortalis*); Zetterstedt, Ins. Lapp. p. 747 (3) (1838); Dipt. Scand Vol. 5, p. 2159 (7) (1846) (*Ortalis*); Scholtz, Zeitschr. f. Ent. Breslau, nº 9, p. 10 (1849); Walker, Ins. Brit. Vol. 2, p. 197 (7) (*Ortalis*); Schiner, Fauna Austr. Vol. 2, p. 85 (1864) (*Myodina*); Loew, Mon. N. Amer. Dipt. Vol. 3, p. 153 (1873) (*Seoptera*); Osten-Sacken, ibidem, Corrections to Vol. 3; Rondani, Dipt. Ital. Prodr. Vol. 7, Tanypez. Bull. Soc. Ent. Ital. Firenze, Vol. 6, p. 5 (1874) (*Myodina*); Röder, Berl. Ent. Zeitschr. Vol. 25, p. 209 (1881); Brauer, Larven-Arbeit, p. 85 (1883); Karsch, Berl. Ent. Zeitschr. Vol. 31, p. 28, Sitzber. (1887); Mik, Wien. Ent. Zeit. Vol. 7, p. 94, 111 (1888); Becker, Ann. Mus. Zool. Acad. St-Petersb. Vol. 12, p. 271 (1907).

syn. 1) *urticae*. Robineau-Desvoidy, Essai sur les Myod. p. 728 (1830) (*Myodina*).

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1) Ich stimme mit Aldrich, *Cat. N. Amer. Dipt.* p. 698 (1905) überein, wenn er *Ortalis? diopsides*, Walker, *List Dipt. Brit. Mus.* Vol. 4, p. 995 (1849) aus Nord-Amerika nicht für ein Synonym von *vibrans*, Linné, hält, wie Coquillett annahm. Es stimmt weder die Grösse, noch die Färbung der Beine, noch die Fühlerform. Vielleicht hat Walker eine *Euxesta*-Art vor sich gehabt.

Nicht zu den Ulidiinen gehörige Gattungen

Genus AMETHYSTA, Macquart

Amethysa. Macquart, Suites à Buffon, Vol. 2, p. 440, pl. 19, f. 5 (1835); Dipt. Exot. Vol. 2 (3), p. 210, pl. 26, f. 10 (1843); Loew, Mon. N. Amer. Dipt. Vol. 25 (1873) emend. in *Amethysta*.

Originalbeschreibung. — « Palpes assez grêles. Face plane; épistome saillant. Troisième article des antennes oblong, peu allongé. Yeux arrondis. Première cellule postérieure des ailes un peu rétrécie à l'extrémité.

» Le petit Diptère pour lequel je forme ce nouveau genre diffère des autres Ortalidées par la face plane, par les yeux arrondis et par la première cellule postérieure des ailes rétrécie à l'extrémité. Cependant il présente les autres caractères de la tribu et particulièrement la saillie buccale. La face plane et la forme ronde des yeux le rapprochent des Tephritides, et si la femelle, que je ne connais pas, avait une tarière saillante, il faudrait le comprendre dans cette tribu. Les nervures des ailes se rapprochent des Ulidies; mais les antennes ne sont par insérées sous une saillie du front.

» Cette Muscide s'est trouvée parmi les Diptères du Cap. Le nom générique fait allusion à la couleur du corps. »

Typische Art : *A. fasciata*, Macquart, Suites à Buffon, Vol. 2, p. 441 (1835). Cap, Süd-Afrika.

Schiner (*Novara-Dipt.* p. 282, Anmerkung, 1868) glaubt die Macquart'sche Gattung auf jene Ulidiinen beziehen zu müssen, welche Loew gleichzeitig in seinen zwei Gattungen *Chaetopsis* und *Euxesta* unterbrachte. Loew erwähnt im dritten Teile der *Mon. N. Amer. Dipt.* p. 25 das Genus, dessen Namen er in *Amethysta* emendiert, mit der Bemerkung, dass man es aus der gegebenen Definition nicht erkennen könne. Er vermutet nicht einmal eine Verwandtschaft mit *Euxesta*.

Auch ich kann mich der Schiner'schen Interpretation, die nur wenig Wahrscheinlichkeit für sich hat, nicht anschliessen. Der Hauptgrund, der dagegen spricht, ist die Heimat der typischen und einzigen Art, Afrika, von wo keine mit der Gattung *Euxesta* auch nur zu verwechselnde Fliege bekannt geworden ist. Aber auch die Charakteristik ist viel zu allgemein, um auf *Euxesta* mit Sicherheit bezogen werden zu können. Dass wir es eher mit einer Ortalidine im weiteren Sinne als mit einer Tephritine zu tun haben, will ich gerne zugeben.

Genus MYIODELLA, Rondani

Myiodella. Rondani, Ann. Mus. Stor. Nat. Genova, Vol. 4, p. 290 (1873).

Durch die Liebenswürdigkeit des Herrn Prof. Dr R. Gestro vom Museum Civ. di Stor Nat. in Genua konnte ich die Rondani'sche Type untersuchen. *Myiodella brachialis*, Rondani (**Taf. 4, Fig. 94**) ist eine Platystomine und gehört in das bekannte Loew'sche Genus *Epicausta*. Da der dritte Band der *Monographs of N. Amer. Dipt.* Dipt., in welchem Loew auf Seite 46 seine Gattung beschrieb, im Dezember 1873, die Rondani'sche Beschreibung aber schon in November dieses Jahres erschien, hat *Myiodella* die Priorität vor *Epicausta*.

Weil Rondani seine Gattung bei der Beschreibung mit *Myiodina*, Robineau-Desvoidy (*Seoptera*, Kirby) verglich, wurde sie bisher für eine Ulidiine gehalten.

Genus RADIONOMYIA, Schiner

Radionomyia, Schiner, Novara-Dipt. p. 290 (1868); Osten-Sacken, Enum. Dipt. Malay. Archip. Ann. Mus. Stor. Nat. Genova, Vol. 16, p. 471 (1881).

Osten-Sacken, der die einzige Art *R. orientalis*, Schiner, aus Java kannte und auch die Schiner'schen Typen in Wien gesehen hatte, sagt loc. cit. : « The genus belongs, I believe, to the *Ulidina*, but the posterior angle of the anal cell is not drawn out in a point. »

Ich kann dem nicht beipflichten, denn der Kopfbau, die Beborstung, die Flügeladerung und die langborstige Subkosta weisen dieser Gattung ihren Platz bei den Ortalidinen im engeren Sinne an. Auch Schiner sagt : « Aus der Gruppe der Ortalinen. »

Fraglich zu den Ulidiinen gehörige Arten

Herina viridis, Macquart, Dipt. Exot. Vol. 2 (3), p. 208, t. 28, f. 4 (1843).

Die stark verengte erste Hinterrandzelle sowie das Gesamtkolorit des Körpers scheinen auf eine Ulidiine hinzudeuten, während die stumpfe, nicht in einen spitzen Zipfel ausgezogene Analzelle anderseits wieder Zweifel an dieser Vermutung wach werden lassen.

Ortalis ? diopsides, Walker, List Brit. Mus. Dipt. Vol. 4, p. 995 (1849); Loew, Mon. N. Amer. Dipt. Vol. 3, p. 200 (1873).

Man vergleiche meine Notiz bei *Seoptera vibrans*, Linné, p. 71.

Ortalis ? costalis, Walker, List Brit. Mus. Dipt. Vol. 4, p. 995 (1849); Loew, Mon. N. Amer. Dipt. Vol. 3, p. 201 (1873).

Da der Kopf der Fliege fehlt, lässt sich nichts weiter sagen, als dass man nach der Beschreibung des Aderverlaufes eine Ulidiine vermuten kann.

Urophrora antillarum, Macquart, Dipt. Exot. Suppl. 4, p. 289, t. 26, f. 17 (1850); Loew, Mon. N. Amer. Dipt. Vol. 1, p. 57 (1862); Vol. 3, p. 201 (1873).

Nach Loew unzweifelhaft eine Ulidiine. Ich bin dieser Deutung wegen der gegen den Flügelrand sich sogar erweiternden ersten Hinterrandzelle in der Macquart'schen Zeichnung nicht ganz sicher.

Ortalis distans, Thomson, Dipt. Eugen. Resa, p. 574 (243) (1868).

Ich führe diese Art hier nur an, weil der Autor schreibt : « Statura fere *Ulidiæ* ». Die Beschreibung gibt sonst keine weiteren Anhaltspunkte.

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Wien, 15. Mai 1910.

HYMENOPTERA

FAM. BELYTIDÆ

HYMENOPTERA

FAM. BELYTIDÆ

par J.-J. KIEFFER, Doct. phil. nat.

AVEC 1 PLANCHE COLORIÉE ET 2 PLANCHES NOIRES

Les deux premiers représentants de la famille des Bélytides furent décrits en 1807 par Jurine, qui établit les genres *Belyta* et *Cinetus*. Vingt-huit ans plus tard, Haliday y ajouta le genre *Ismarus*. On ne connaissait que ces trois genres, quand Förster fonda, en 1856, sur le genre *Belyta*, une famille qu'il nomma *Belytoidae;* aux trois genres existants, il en ajouta quinze autres, dont l'un, *Synacra*, revient aux Diapriides et deux autres, à savoir *Zygota* et *Zelotypa*, sont considérés dans le présent travail comme synonymes de *Aclista* et *Xenotoma*. *Opazon* fut créé en 1857 par Haliday, *Betyla* en 1889 par Cameron, *Scorpioteleia* et *Stylidodon* en 1897 par Ashmead. Ce dernier auteur énuméra dans sa « Classification of the Proctotrupoidea » (*Journ. New York Ent. Soc.* Vol. 10, p. 243 [1902]) vingt-trois genres, parmi lesquels se retrouvent *Synacra*, placé antérieurement et avec raison parmi les Diapriides (1893), *Zygota* et *Zelotypa;* en retranchant ces trois derniers, le chiffre des genres admis en 1902 serait de vingt. Ajoutons encore que, jusqu'à cette date, on ne connaissait les représentants de cette famille que pour l'Europe et l'Amérique du Nord, sauf une espèce de Transcaucasie, décrite par Szépligeti, et une de Nouvelle-Zélande, décrite par Cameron. Nous divisons ici les Bélytides en quarante genres, avec cinq cent cinquante espèces. Sur ce nombre, deux cent quatre-vingt-sept espèces reviennent à l'Europe; elles sont réparties en vingt-quatre genres, dont onze particuliers à l'Europe; cent vingt-huit ont été observées dans l'Amérique du Nord et sont comprises dans quatorze genres, dont un seul est spécial aux Etats-Unis, les treize autres ont aussi des représentants en Europe; douze genres avec quatorze espèces reviennent à l'Amérique du Sud et sont particuliers à la région néotropicale, sauf le genre *Oxylabis*, qui existe aussi dans les régions paléarctique et néarctique; cinq espèces appartenant à cinq genres différents ont été observées dans l'Amérique Centrale (quatre au Nicaragua et une à Cuba), quatre de ces genres ont des représentants en Europe et aux Etats-Unis, le cinquième est spécial à l'Amérique Centrale; quant à

l'Afrique, on n'y a observé que quatre espèces, dont deux en Tunisie, une en Afrique Centrale et une à Madagascar; elles reviennent à trois genres différents, qui ont tous trois des représentants dans les régions paléarctique et néarctique; l'Asie n'arrive qu'en quatrième lieu avec trois espèces, dont une du Japon, une des Indes orientales et une de Transcaucasie; ces trois espèces appartiennent à trois genres ayant des représentants en Europe; on ne connaît de même que trois espèces pour la région australienne, à savoir une d'Australie, une de Nouvelle-Guinée britannique et une de Nouvelle-Zélande; sur les trois genres auxquels reviennent ces espèces, deux sont particuliers à cette région, le troisième, *Aclista*, se retrouve en Europe, en Asie, en Afrique et dans l'Amérique du Nord.

Caractères généraux. — Tête transversale ou subglobuleuse, rarement un peu allongée, ordinairement aussi haute ou plus haute que longue; yeux presque toujours velus; ocelles disposés en triangle, nuls chez quelques espèces aptères; bouche située sur le dessous de la tête, près du bord postérieur, face obliquement déclive depuis l'insertion des antennes jusqu'à la bouche; mandibules rarement simples, ordinairement l'une est conformée autrement que l'autre. Palpes maxillaires de cinq articles, rarement de un à quatre; les labiaux de trois articles, rarement de un ou deux. Antennes insérées sur une proéminence frontale, qui ne fait défaut que chez le genre *Ismarus;* celles de la femelle se composent de quinze, rarement de quatorze articles, celles du mâle toujours de quatorze articles, dont le troisième, rarement le quatrième, est échancré ou sinueux, très rarement aucun article n'est échancré ni sinueux; scape allongé.

Pronotum ordinairement peu visible d'en haut, atteignant les écaillettes, largement découpé en arc postérieurement, rarement tronqué en arrière, devant du prothorax formant un col court et étroit. Mesonotum au moins aussi long que large, ordinairement divisé en trois lobes par deux sillons parapsidaux percurrents. Scutellum avec une profonde fossette à sa base, rarement nul ou sans fossette. Metanotum très court et faiblement déclive. Segment médian court, transversal, presque horizontal, sans carène médiane, mais seulement avec une arête médiane parfois bifurquée. Pleures lisses et brillantes, propleures déprimées, mésopleures convexes. Ailes pubescentes et brièvement ciliées; les antérieures (**Pl. I, Fig. 4**) offrent la nervation suivante : une nervure *costale* (fig. *ac*), une *sous-costale* qui aboutit à la costale vers le milieu de l'aile (fig. *ahc*) et la suit sur un espace plus ou moins long, en y formant la nervure *marginale* (fig. *cd*), qui est parfois seulement ponctiforme; la courte nervure qui a son origine à l'extrémité de la marginale et qui se dirige vers le disque alaire s'appelle *stigmatique* (fig. *dk*); la *radiale* ou le *radius* fait un angle avec la stigmatique et se dirige de l'extrémité de celle-ci distalement vers le bord antérieur de l'aile (fig. *gk*); elle forme avec le bord antérieur la cellule radiale (fig. *e*); le rameau qui a également son origine à l'extrémité de la stigmatique, mais qui se dirige vers la partie proximale de l'aile, est la nervure *récurrente* ou vestige de la *cubitale* (fig. *kf*); la portion de la nervure costale qui dépasse distalement la stigmatique est nommée *postmarginale* (fig. *di*); la *médiane* sort de la base de l'aile (fig. *aon*) et est reliée à la sous-costale par une transversale, connue sous le nom de *basale* (fig. *ho*); la *discoïdale* est indiquée par une ligne longitudinale (fig. *m*) située entre la radiale et le *prolongement de la médiane;* ces deux dernières nervures, ainsi que la radiale, la postmarginale et la récurrente peuvent faire défaut. Ailes inférieures avec une cellule médiane fermée, sauf chez *Rhynchopsilus* et *Pantolyta*. Trochanters allongés. Fémurs épaissis, leur base très amincie; tibias très faiblement et graduellement grossis de la base à l'extrémité; éperons 1, 2, 2, celui des tibias antérieurs grêle, arqué et bifide; tarses grêles, de cinq articles, crochets simples, sauf chez le genre *Anommatium*.

Abdomen distinctement pétiolé; premier segment ou pétiole ordinairement plus long que gros; deuxième tergite et deuxième sternite toujours de beaucoup les plus longs.

Mœurs. — Les Bélytides, dont les mœurs sont connues, vivent à l'état larvaire aux dépens des Diptères. *Aclista lasiorum* paraît être myrmécophile, ayant été recueilli dans un nid de *Lasius bruneus*.

TABLEAU DES GENRES

1. *Front plan, non proéminent à l'insertion des antennes; yeux glabres; mesonotum sans sillons parapsidaux; les deux sexes ailés;* ♂ ♀ . . . . . 1. Genus Ismarus, Haliday.

— *Front proéminent à l'insertion des antennes; yeux ordinairement velus; sillons parapsidaux bien marqués et percurrents ou bien les ailes sont nulles ou avortées* . . . . . 2.

2. *Palpes maxillaires et labiaux formés par un article unique et court; yeux gabres; ocelles et ailes nuls; antennes de quatorze articles; sillons parapsidaux parfois indistincts; scutellum sans fossette; cinquième article des tarses postérieurs égalant presque les trois précédents réunis, crochets avec une dent à leur base;* ♀ . . . 2. Genus Anommatium, Förster.

— *Palpes pluri-articulés; yeux ordinairement velus; ailes normales ou en moignons; cinquième article des tarses postérieurs moins long, crochets simples* 3

3. *Thorax très étroit, fortement rétréci entre le méso- et le métathorax; mesonotum sans sillons parapsidaux, armé de chaque côté, en avant, d'une dent conique; scutellum non distinct; ailes en moignons, antennes de quinze articles, très épaissies distalement.* ♀. . . 3. Genus Betyla, Cameron.

— *Thorax non rétréci entre le méso- et le métathorax; scutellum bien distinct, avec une ou deux fossettes profondes à sa base* . . . . . 4.

4. *Scutellum à extrémité aigüe ou proéminente sous forme de dent ou bidentée, ou bien armé d'une épine horizontale; pétiole très long.* . . . . . 5.

— *Scutellum inerme, arrondi en arrière* . . . . . 8.

5. *Metanotum avec une dent ou une spinule* . . . . . 6.

— *Metanotum inerme, avec une arête longitudinale et médiane.* . . . . . 7.

6. *Extrémité du scutellum, vue de côté, proéminente sous forme de dent obtuse; metanotum avec une dent obtuse; mandibules longues et croisées;* ♀. . . . . 4. Genus Prosoxylabis, Kieffer.

— *Scutellum, vu d'en haut, triangulaire et aigu; metanotum avec une longue spinule; mandibules petites;* ♂. . . . . 5. Genus Monoxylabis, Kieffer.

7. *Scutellum prolongé en arrière en une épine horizontale;* ♂ . . . 6. Genus Acidopsilus, Kieffer.

— *Scutellum armé de deux courtes dents dressées au bord postérieur;* ♂ 7. Genus Odontopsilus, Kieffer.

8. *Metanotum ou segment médian armé d'une ou de deux épines ou dents* . . . . . 9.

— *Metanotum et segment médian inermes.* . . . . . 14.

9. *Quatrième article des antennes échancré; metanotum avec deux spinules courtes et dressées; yeux glabres; pétiole trois à quatre fois aussi long que gros;* ♂ . . . . . 8. Genus Dissoxylabis, Kieffer.

— *Quatrième article des antennes jamais échancré; metanotum ou segment médian avec une seule spinule ou dent; yeux velus* . . . . . 10.

10. *Pétiole au maximum deux fois aussi long que gros, abdomen ellipsoïdal* . . . . . 11.

— *Pétiole trois à quatre fois aussi long que gros; abdomen fusiforme.* . . . . . 12.

11. *Mandibules longues et croisées; troisième article des antennes du mâle non échancré;* ♂ . . . . . 9. Genus Anoxylabis, Kieffer.

— *Mandibules petites, non croisées, toutes deux bidentées; troisième article antennaire du mâle échancré;* ♂ ♀ . . . . . 10. Genus Oxylabis, Förster.

12. *Mesonotum parcouru par quatre arêtes qui longent le côté interne de quatre sillons; disque du scutellum en tubercule pyramidal; mandibules longues et croisées;* ♀ . . . . . 11. Genus Tropidopsilus, Kieffer.

— *Mesonotum sans arêtes; scutellum non en tubercule* . . . . . 13.

13. *Mandibules petites; pronotum visible d'en haut, tronqué en arrière;* ♀ . . . . . 12. Genus Camptopsilus, Kieffer.

— *Mandibules longues et croisées, l'une bidentée, à dent terminale falciforme, l'autre tridentée; pronotum à peine visible d'en haut;* ♂ ♀ . . . . . 13. Genus Paroxylabis, Kieffer.

14. *Pronotum armé de chaque côté, près du bord postérieur, d'une petite dent triangulaire et aiguë; disque du scutellum comprimé et caréné;* ♂ . . . . . 14. Genus Therinopsilus, Kieffer.

— *Pronotum inerme; disque du scutellum non comprimé ni caréné.* . . . . . 15.

15. *Mandibules proéminentes en un bec droit* . . . . . 16.

— *Mandibules ne formant pas un bec, croisées ou se couvrant* . . . . . 18.

16. *Scape inerme, nervure médiane nulle, palpes courts;* ♂ ♀. . . 15. Genus Opazon, Haliday.

— *Scape terminé par deux minimes dents; nervure médiane bien marquée; palpes longs* . . . . . 17.

17. *Ailes inférieures sans cellule basale; cellule radiale ouverte;* ♀. . 16. Genus Rhynchopsilus, Kieffer.

— *Ailes inférieures avec une cellule basale fermée; cellule radiale fermée;* ♂ . . . . . 16. Genus Rhynchophilus, Subg. Promeuselia, nov. subg.

18. *Troisième article des antennes presque aussi long que tous les suivants réunis,* ♀ . . . . . 17. Genus Diphora, Förster.

— *Troisième article des antennes beaucoup plus court que les suivants réunis* . . . . . 19.

19. *Pétiole gros, proéminent en cœur sur le dessus; base du deuxième sternite prolongé en sac en avant chez la femelle* . . . . . 20.

— *Pétiole subcylindrique, sans proéminence sur la partie dorsale; deuxième sternite non prolongé en avant* . . . . . 21.

20. *Prothorax avec un anneau de feutrage; scape terminé par deux minimes spinules; yeux glabres;* ♂ ♀ . . . . . 18. Genus Acanosema, Kieffer.

— *Prothorax sans feutrage; scape inerme; yeux velus;* ♀ . . . . 19. Genus Cardiopsilus, Kieffer.

21. *Nervure marginale épaissie en un stigma aussi long que large, subquadrangulaire; thorax avec deux petites spinules dirigées en arrière et situées près des écaillettes; metanotum aussi long que le segment médian;* ♂ . . . . . 3. Genus Betyla, Cameron.

— *Nervure non en forme de stigma; thorax inerme; metanotum beaucoup plus court que le segment médian* . . . . . 22.

22. *Arête médiane du segment médian bifurquée* . . . . . 24. Genus Belyta, Jurine.

— *Arête médiane du segment médian non bifurquée.* . . . . . 23.

23. *Ailes normalement développées, sans nervure médiane ni stigmatique; basale indiquée par un court vestige; marginale ponctiforme; thorax aussi large que haut;* ♀ . . . . . 23. Genus Probelyta, Kieffer.

— *Ailes avec une nervure médiane, une stigmatique et une basale bien marquées, ou bien ailes atrophiées* . . . . . 24.

24. *Thorax plus large que haut, tête souvent plus longue que large;* ♂♀ . . . 25. Genus Paraclista, Kieffer.

— *Thorax au moins aussi haut que large; tête non prolongée* . . . . . 25.

25. *Articles du flagellum hérissés de poils deux à trois fois aussi longs que la grosseur des articles;* ♂ . . . . . 34. Genus Procinetus, Kieffer.

— *Articles du flagellum sans longs poils* . . . . . 26.

26. *Cellule radiale nulle ou ouverte à l'extrémité, ou bien ailes atrophiées* . . . . . 27.

— *Cellule radiale bien marquée et fermée* . . . . . 32.

27. *Ailes atrophiées;* ♀ . . . . . 28.

— *Ailes normalement développées* . . . . . 29.

28. *Articles du flagellum pas plus longs que gros, sauf le premier et le dernier; dernier segment abdominal (septième ou huitième) pas plus long que les trois précédents réunis et pas distinctement comprimé* . . . . . 26. Genus Aclista, Förster.

— *Les huit premiers articles du flagellum plus longs que gros; dernier segment abdominal (septième ou huitième) fortement comprimé et plus long que les trois précédents réunis; une des mandibules bilobée, l'autre trilobée* . . . . . 28. Genus Acropiesta, Förster.

29. *Nervure récurrente longue et dirigée vers la discoïdale; yeux glabres* . . . . . 30.

— *Nervure récurrente indistincte ou dirigée vers la basale; yeux velus* . . . . . 31.

30. *Scape inerme; antennes de la femelle de quinze articles et sans massue; une des mandibules bilobée, l'autre trilobée;* ♂♀ . . 20. Genus Psilomma, Förster.

— *Scape terminé par deux minimes spinules, antennes de la femelle de quatorze articles, avec une massue de six articles;* ♀ . . . . 21. Genus Acanopsilus, Kieffer.

31. *Ailes inférieures sans cellule; une des mandibules bidentée, l'autre tridentée; palpes labiaux de deux articles;* ♂♀ . . . . . 22. Genus Pantolyta, Förster.

— *Ailes inférieures avec une cellule basale fermée;* ♂♀ . . . . . 26. Genus Aclista, Förster.

32. *Mandibules longues, croisées, l'une bidentée, à dent terminale falciforme, l'autre tridentée; cellule radiale beaucoup plus longue que la nervure marginale* . . . . . 33.

— *Mandibules petites, non croisées* . . . . . 34.

33. *Pétiole plus long que l'abdomen; deuxième tergite occupant les quatre cinquièmes de l'abdomen; troisième ou dernier en cône déprimé;* ♀ . 32. Genus Prozelotypa, Kieffer.

— *Pétiole beaucoup plus court que l'abdomen, qui a quatre à huit tergites* . . . . . 31. Genus Xenotoma, Förster.

34. *Nervure marginale plus de deux fois aussi longue que la cellule radiale; récurrente dirigée vers la basale;* ♂♀ . . . . . 33. Genus Macrohynnis, Förster.

— *Nervure marginale au maximum de moitié plus longue que la cellule radiale* . . . . . 35.

35. *Cellule radiale beaucoup plus longue que la nervure marginale.* . . . . . 36.

— *Cellule radiale à peu près aussi longue ou plus courte que la nervure marginale* . . . . . 44.

36. *Femelles* . . . . . 37.

— *Mâles* . . . . . 42.

37. *Abdomen composé de six à huit tergites, le grand tergite non rétréci en tube* . . . . . 38.
— *Abdomen de deux à cinq tergites, le deuxième ou le troisième rétréci en tube en arrière; chez une espèce douteusement à rapporter ici, l'abdomen est conique et comprimé en arrière* . . . . . 41.
38. *Abdomen de six segments, le deuxième à peine plus long que le pétiole, le troisième un peu plus long que les deux suivants réunis, le sixième conique* . . . . . 38. Genus Stylidodon, Ashmead.
— *Abdomen de sept ou huit segments, le deuxième toujours beaucoup plus long que le pétiole ou premier segment.* . . . . . 39.
39. *Extrémité de l'abdomen légèrement recourbée par en haut* . . . 30. Genus Anectata, Förster.
— *Extrémité de l'abdomen non recourbée.* . . . . . 40.
40. *Dernier tergite pas plus long que les trois précédents réunis et pas distinctement comprimé; récurrente droite ou nulle.* . . . . . 27. Genus Pantoclis, Förster.
— *Dernier tergite beaucoup plus long que les trois précédents réunis et fortement comprimé; récurrente droite ou arquée* . . . . . 28. Genus Acropiesta, Förster.
41. *Dernier article antennaire guère plus long que l'avant-dernier; abdomen ayant deux à quatre tergites après le pétiole* . . . . 39. Genus Miota, Förster.
— *Dernier article antennaire aussi long que les trois précédents réunis; abdomen ayant seulement un tergite après le pétiole* . . . . 40. Genus Miotella, Kieffer.
42. *Récurrente droite, sauf parfois à l'extrémité; pétiole non trois fois aussi long que gros* . . . . . 43.
— *Récurrente arquée; pétiole trois fois aussi long que gros.* . . . 39. Genus Miota, Förster.
43. *Segment anal un peu recourbé par en haut* . . . . . 30. Genus Anectata, Förster.
— *Segment anal non courbé par en haut, horizontal ou courbé par en bas.* 27. Genus Pantoclis, Förster.
44. *Femelles* . . . . . 45.
— *Mâles.* . . . . . 48.
45. *Deux ou trois derniers segments abdominaux longs, minces, en forme de tube, et ressemblant aux segments terminaux d'un scorpion.* . 37. Genus Scorpioteleia, Ashmead.
— *Abdomen autrement conformé* . . . . . 46.
46. *Yeux glabres; cellule radiale très petite, un peu plus courte que la nervure marginale; abdomen de sept tergites, dont le dernier est fortement comprimé et plus long que les trois précédents réunis; articles antennaires 10-15 faiblement renflés en massue et un peu transversaux, sauf le quinzième* . . . . . 29. Genus Meuselia, Kieffer.
— *Yeux velus; cellule radiale longue; antennes non renflées en massue, non transversaux* . . . . . 47.
47. *Extrémité de l'abdomen et souvent tout l'abdomen comprimé; scape robuste, pas plus long que le troisième article; récurrente droite ou arquée* . . . . . 36. Genus Leptorhaptus, Förster.
— *Extrémité de l'abdomen non comprimée; scape grêle, aussi mince que le flagellum, plus long que le troisième article; récurrente arquée* . . . . . 35. Genus Cinetus, Jurine.
48. *Scape robuste, pas plus long que le troisième article; récurrente droite ou arquée; abdomen piriforme, le deuxième tergite atteint presque l'extrémité, le reste pas distinctement segmenté* . . . 36. Genus Leptorhaptus, Förster.

— *Scape grêle, aussi mince que le flagellum, plus long que le troisième article; récurrente arquée; le deuxième tergite est distant de l'extrémité, segments suivants distinctement séparés* . . . . 35. Genus Cinetus, Jurine.

1. Genus ISMARUS, Haliday

Cinetus (part.). Curtis, Brit. Ent. Vol. 8, p. 380 (1831).
Belyta (part). Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 345 (1834).
Ismarus. Haliday, Ent. Mag. Vol. 2, p. 467 (1835).
Entomia. Herrich-Schäffer, Nomencl. Ent. Vol. 2, p. 127 (1840).
Entomius. Haliday, Nat. Hist. Review, p. 168 (1857).

Caractères. — Tête transversale et plus large que le thorax; mandibules du type arquées, égales, se couvrant, bilobées à l'extrémité, les deux lobes égaux et triangulaires. Palpes maxillaires de quatre ou cinq articles, les labiaux de trois. Front plan, non proéminent à l'insertion des antennes qui est située vis-à-vis de la base des yeux, un peu au-dessus du clypeus; par ce carectère, *Ismarus* se distingue de tous les autres genres des Bélytides, ce qui a déterminé G.-G. Thomson à créer, pour ce genre, la tribu des *Ismarini*. Antennes de la femelle composées de quinze articles; celles du mâle de quatorze, dont le quatrième est faiblement sinueux. Prothorax à peine visible d'en haut, tronqué en avant. Mesonotum convexe; sillons parapsidaux nuls ou indiqués en avant par un point enfoncé. Scutellum convexe, semi-circulaire, avec un large sillon transversal à sa base. Metanotum retombant perpendiculairement; segment médian petit et déclive. Ailes antérieures à nervation complète, cellule radiale fermée; ailes postérieures avec une cellule basale fermée. Tibias postérieurs amincis dans la moitié proximale, renflés et un peu comprimés dans la moitié distale. Pétiole au maximum aussi long que gros; abdomen ellipsoïdal, à peine déprimé, composé de sept tergites et de six sternites chez la femelle, de huit tergites chez le mâle; deuxième tergite occupant la moitié antérieure, avec un sillon longitudinal en avant; divisions des tergites mieux marquées que chez les autres genres.

Type du genre : *I. dorsiger*, Curtis (**Pl. 3, Fig. 8**).

Distribution géographique des espèces. — Ce genre comprend des insectes d'Europe et de l'Amérique du Nord.

1. *I. dorsiger*, Curtis (*anomala*, Nees, *Neesi*, Förster), Brit. Ent. Vol. 8, p. 380 (1831). Angleterre, Allemagne.
2. *I. flavicornis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 378 (1858). Angleterre, Suède.
3. *I. Halidayi*, Förster (*campanulatus* Herrich-Schäffer?), Verh. Nat. Ver. Preuss. Rheinl. Vol. 7, p. 285 (1850). Angleterre, Allemagne et Hongrie.
4. *I. longicornis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 378 (1858). Suède.
5. *I. nevadensis*, Kieffer, Berl. Ent. Zeitschr. Vol. 50, p. 275 (1906). Etats-Unis : Nevada.
6. *I. rugulosus*, Förster, Verh. Nat. Ver. Preuss. Rheinl. Vol. 7, p. 284 (1850). Suède, Allemagne, France.

2. Genus ANOMMATIUM, Förster

Anommatium. Förster, Hym. Stud. Vol. 2, p. 130, 140 (1856).

Caractères. — *Femelle.* — Tête subarrondie vue d'en haut et de côté; yeux glabres, petits, circulaires, plus courts que les joues; ocelles nuls; bouche petite, non proéminente; mandibules bidentées, la dent terminale longue. Palpes maxillaires formant un petit article ovoïdal, les labiaux remplacés par une petite verrue, terminée par une forte soie. Antennes de quatorze articles, insérées sur une petite proéminence vis-à-vis de la base des yeux; scape égal aux quatre articles suivants

réunis; troisième article obconique, un peu plus long que gros; les suivants globuleux et graduellement un peu épaissis, le quatorzième ovoïdal. Thorax plus étroit que la tête, allongé; pronotum non visible d'en haut; mesonotum presque semi-circulaire, avec ou sans sillons parapsidaux; scutellum graduellement aminci en arrière, sans impression en avant; metanotum nul; segment médian horizontal, de même niveau que le mesonotum, quadrangulaire, ordinairement traversé par une arête médiane Ailes nulles. Tibias postérieurs plus longs que le fémur, graduellement un peu épaissis; articles tarsaux 2-4 deux fois aussi longs que gros, le cinquième presque égal aux trois précédents réunis; crochets grands, fortement arqués, avec une dent à leur base; par la forme du cinquième article et des crochets tarsaux, ce genre se distingue de tous les autres. Pétiole pas plus long que gros; abdomen subfusiforme, plus large que la tête, non comprimé ni déprimé; sternites n'occupant que le tiers médian du dessous de l'abdomen; grand stergite strié à sa base, dépassant à peine le milieu de l'abdomen; tergites 3-6 également petits, graduellement amincis; le septième conique, aussi long que les trois précédents réunis; sternites au nombre de six; tarière proéminente (**Pl. 2, Fig. 10**, ♀).

Distribution géographique des espèces. — Ce genre est particulier à l'Europe et ne comprend que deux espèces.

1. *A. Ashmeadi*, Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 54, p. 592 (1904). Allemagne, Autriche, Italie.
2. *A. stramineum*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 378 (1908). Italie.

3. Genus BETYLA, Cameron

Betyla. Cameron, Mem. Proc. Manchester Soc. (4), Vol. 2, p. 12 (1889).
Tanyzonus. Marshall, Ent. M. Mag. Vol. 28, p. 276 (1892).

Caractères. — Tête globuleuse vue d'en haut, aussi longue que haute vue de côté; front fortement prolongé en avant, comme dans le genre *Paraclista;* yeux velus, circulaires. Antennes de la femelle de quinze articles; scape aussi long que les six articles suivants réunis; 2-7 plus longs que gros, huitième un peu grossi, aussi long que gros; 9-14 plus gros que le huitième, très transversaux, quinzième en cône pointu, deux fois aussi long que gros. Antennes du mâle de quatorze articles, très minces; troisième article échancré, trois fois aussi long que le deuxième; quatrième plus court que le troisième, trois à quatre fois aussi long que gros. Thorax de la femelle étroit, resserré entre le méso- et le métathorax, mesonotum sans sillons parapsidaux, armé de chaque côté, en avant, d'une forte dent; scutellum non formé; segment médian sans arête. Thorax du mâle normalement développé, non aminci ni resserré, mesonotum à sillons parapsidaux percurrents, base du scutellum avec une fossette. Ailes nulles chez la femelle, normales chez le mâle, nervure marginale formée par un stigma carré; cellule radiale ouverte à l'extrémité, longue; nervation complète. Pétiole plus long que gros, prolongé en une grosse dent sur sa partie ventrale; deuxième tergite très long; les quatre tergites suivants courts.

Parasite de la larve (vert-luisant) du Diptère *Bolitophila luminosa* (**Pl. 1, Fig. 18** et **19**, ♀ et ♂).

Distribution géographique de l'espèce. — L'unique espèce est exotique.

1. *B. fulva*, Cameron (*bolitophilae*, Marshall), Mem. Proc. Manchester Soc. (4). Vol. 2, p. 13 (1889). Nouvelle-Zélande.

4. Genus PROSOXYLABIS, Kieffer

Prosoxylabis. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 344 (1909).

Caractères. — *Femelle.* — Tête très transversale vue d'en haut; clypeus en coussinet; yeux velus et très grands, atteignant le bord occipital et presque les mandibules, front moins large que les

yeux; mandibules longues et croisées, comme chez *Xenotoma*, avec une grosse dent obtuse au milieu, leur moitié distale falciforme. Antennes filiformes, composées de quinze articles chez la femelle; articles 3-9 graduellement raccourcis, 9-14 pas plus longs que gros. Thorax plus haut que large; sillons parapsidaux bordés par un arête le long de leur côté interne; le petit sillon du mesonotum, situé près de l'écaillette, est bordé de la même façon; deux autres arêtes moins proéminentes et parallèles se trouvent entre les sillons parapsidaux, en avant; *extrémité du scutellum, vue de côté, proéminente sous forme de dent obtuse; metanotum avec une dent obtuse;* arête du segment médian simple; bord supérieur des propleures avec un sillon qui longe le mesonotum. Cellule radiale fermée, plus courte que la nervure marginale; stigmatique beaucoup plus courte que la marginale; récurrente continuant la direction du radius, dirigée vers la basale. Ailes inférieures avec une cellule fermée. Pétiole aussi long que le reste de l'abdomen, avec quatre arêtes; abdomen subfusiforme, un peu déprimé dorsalement, fortement convexe ventralement; tergites 3-6 également courts, septième assez fortement comprimé, égal aux trois précédents réunis.

Mâle inconnu.

Distribution géographique de l'espèce. — Ce genre renferme une espèce de l'Amérique du Sud.

1. *P. maculipennis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33 p. 344 (1909). Bolivie.

5. Genus MONOXYLABIS, Kieffer

Monoxylabis. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 345 (1909).

Caractères. — *Mâle.* — Tête très transversale vue d'en haut, beaucoup plus haute que longue vue de côté; yeux velus, deux à trois fois aussi longs que les joues; mandibules petites. Antennes filiformes; troisième article échancré, tous les articles du flagellum allongés. Thorax plus haut que large; sillons parapsidaux profonds; *scutellum, vu d'en haut, triangulaire et aigu*, avec une fossette occupant presque tout le dessus; vu de côté, proéminent en forme de dent oblique; *metanotum avec une spinule longue et un peu arquée;* segment médian avec une arête simple. Cellule radiale fermée, un peu plus courte que la nervure marginale; stigmatique beaucoup plus courte que la marginale; récurrente peu marquée, dirigée vers la base de la basale. Ailes inférieures avec une cellule fermée. Pétiole cinq fois aussi long que gros, avec quatre arêtes; abdomen ovoïdal et déprimé.

Femelle inconnue.

Distribution géographique de l'espèce. — La seule espèce qui forme ce genre revient à l'Amérique du Sud.

1. *M. flavimanus*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 345 (1909). Bolivie.

6. Genus ACIDOPSILUS, Kieffer

Acidopsilus. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 340 (1909).

Caractères. — *Mâle.* — Tête très transversale vue d'en haut, beaucoup plus haute que longue vue de côté; yeux velus, presque deux fois aussi longs que les joues; mandibules longues et croisées comme chez *Xenotoma*. Antennes filiformes, de quatorze articles chez le mâle; articles du flagellum très allongés. Bord supérieur des propleures avec une gouttière qui longe le mesonotum. Sillons parapsidaux profonds. *Scutellum prolongé en arrière en une épine horizontale*; fossette basale occupant presque tout le disque. Metanotum et segment médian avec une arête longitudinale et médiane. Cellule radiale fermée,

beaucoup plus longue que la nervure marginale; stigmatique plus courte que la marginale; récurrente oblique, dirigée vers la discoïdale; basale très arquée. Ailes inférieures avec une cellule fermée. Pétiole plusieurs fois aussi long que gros, avec quatre arêtes dorsales; abdomen subfusiforme et déprimé, composé de sept tergites.

Femelle inconnue.

Distribution géographique de l'espèce. — L'unique espèce de ce genre est propre à l'Amérique du Sud.

1. *A. longicornis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 340 (1909). Bolivie.

7. Genus ODONTOPSILUS, Kieffer

Odontopsilus. Kieffer, Ann. Soc. Scientif. Bruxelles. Vol. 33, p. 341 (1909).

Caractères. — *Mâle.* — Tête transversale vue d'en haut, plus haute que longue vue de côté; yeux velus, de moitié plus longs que les joues; mandibules longues et croisées comme chez *Xenotoma*. Antennes filiformes, composées de quatorze articles chez le mâle; troisième et quatrième articles sans échancrure; articles du flagellum très allongés. Thorax plus haut que large; propleures enfoncées, leur bord supérieur creusé en une goutière, qui longe le mesonotum et qui est bordé des deux côtés par une arête; sillons parapsidaux bordés par une arête le long de leur côté interne. *Bord postérieur du scutellum avec deux courtes dents dressées* et situées l'une près de l'autre; en dessous de ces dents, le scutellum retombe presque perpendiculairement sur le metanotum qui, comme le segment median, est traversé par une arête longitudinale et médiane. Ailes inférieures avec une cellule fermée. Pétiole quatre fois aussi long que gros, avec quatre arêtes dorsales; abdomen un peu déprimé, strié à la base du grand tergite; les tergites 3-8 très courts.

Femelle inconnue.

Distribution géographique de l'espèce. — Ce genre ne renferme qu'une espèce de l'Amérique du Sud.

1. *O. tenuicornis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 341 (1909). Pérou.

8. Genus DISSOXYLABIS, Kieffer

Dissoxylabis. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 342 (1909).

Caractères. — *Mâle.* — Tête transversale vue d'en haut, plus haute que longue vue de côté; *yeux glabres*. deux à trois fois aussi longs que les joues; clypeus en verrue aiguë; une arête va du clypeus jusque entre les antennes. Celles-ci filiformes, de quatorze articles chez le mâle; *quatrième article échancré;* 3-9 graduellement raccourcis, neuvième à peine plus long que gros. Thorax plus haut que large; pronotum non visible d'en haut; sillons parapsidaux percurrents; scutellum arrondi en arrière; *metanotum avec deux spinules* courtes et droites, situées l'une à côté de l'autre; segment médian avec une arête simple. *Cellule radiale ouverte au bord;* stigmatique aussi longue que la marginale; radius faiblement marqué, atteignant le bord; ailes inférieures avec une cellule fermée. Pétiole trois à quatre fois aussi long que gros, avec quatre arêtes; abdomen déprimé, graduellement aminci en avant, où le grand tergite a, de chaque côté, une légère impression allongée; tergites 3 et 4 très petits; cinquième presque égal aux deux précédents réunis; sixième en forme de minime lobe.

Femelle inconnue

Distribution géographique de l'espèce. — La seule espèce de ce genre provient de l'Amérique du Sud.

1. *D. hirtipes*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 342 (1909). Bolivie, Pérou.

9. Genus ANOXYLABIS, Kieffer

Anoxylabis. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 343 (1909).

Caractères. — *Mâle.* — Tête très transversale vue d'en haut; *yeux velus*, trois fois aussi longs que les joues; mandibules longues et croisées, comme chez *Xenotoma*. Antennes filiformes, articles 3 et 4 non échancrés; tous les articles du flagellum allongés. Thorax plus haut que large; sillons parapsidaux percurrents; scutellum arrondi en arrière; *metanotum avec une petite dent*; segment médian avec une arête simple. Cellule radiale fermée, plus longue que la nervure marginale; stigmatique plus courte que la marginale; récurrente continuant la direction du radius, dirigée vers la basale. Ailes inférieures avec une cellule fermée. Pétiole court, deux fois aussi long que gros; abdomen déprimé, ellipsoïdal, tergites 3-6 très courts, septième plus long que le sixième, recourbé par en haut.

Femelle inconnue.

Distribution géographique de l'espèce. — Ce genre est établi sur un insecte de l'Amérique du Sud.

1. *A. laticeps*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 343 (1909). Bolivie.

10. Genus OXYLABIS, Förster

Belyta (part.). Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 339, n° 32 (1834).
Oxylabis. Förster, Hym. Stud. Vol. 2, p. 128, 130, 133 (1856).
Lyteba. Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 180 (1858).
Cinetus (part.). Nees, ibidem, p. 348, nos 1, 2 (1858).
Aneurrhynchus (part). Provancher, Le Natural. Canad. Vol. 12, p. 262 (1881).

Caractères. — Tête transversale vue d'en haut, triangulaire et plus haute que longue étant vue de côté; yeux velus et deux fois aussi longs que les joues, qui sont séparées de la face par un sillon; ocelles en triangle; mandibules petites, toutes deux bidentées, dent terminale longue et pointue, dent latérale sur une mandibule obtuse et située au milieu, sur l'autre pointue et située au dernier tiers (**Pl. 2, Fig. 14, 15**). Palpes maxillaires de cinq articles, les labiaux de trois. Antennes du mâle filiformes, à pubescence à peine perceptible; scape à peine plus court que les deux articles suivants réunis, cylindrique, faiblement arqué; deuxième article à peine plus long que gros; troisième plus long que le quatrième, presque trois fois aussi long que gros, faiblement échancré à sa base, 4-13 graduellement un peu raccourcis, le treizième encore au moins deux fois aussi long que gros. Antennes de la femelle de quinze, rarement de quatorze articles, graduellement mais faiblement épaissies distalement; scape égal aux trois ou quatre articles suivants réunis; troisième article de une et demie à trois fois aussi long que gros, les suivants graduellement raccourcis, 7-10 derniers arrondis, aussi gros ou plus gros que longs, quinzième ovoïdal. Prothorax tronqué en avant, à peine visible d'en haut. Sillons parapsidaux convergents en arrière. Scutellum arrondi en arrière, avec une grande fossette en avant. *Metanotum avec une épine ou dent* (**Pl. 1, Fig. 11**). Segment médian presque horizontal avec trois arêtes longitudinales. Nervure marginale plus longue que la stigmatique, celle-ci égale à la postmarginale, courte et oblique;

radius atteignant rarement le bord; récurrente dirigée vers le milieu de la basale. Ailes postérieures avec une cellule basale fermée. Pétiole une et demie à deux fois aussi long que gros, avec quatre arêtes parallèles; abdomen ellipsoïdal, faiblement déprimé, l'extrémité faiblement incurvée dans les deux sexes; deuxième tergite occupant les trois-quarts antérieurs, ayant ordinairement à sa base un sillon longitudinal et médian, le reste du grand segment souvent ponctué chez la femelle, toujours lisse chez le mâle; tergites 3-6 transversaux et d'égale longueur; septième un peu plus long (**Pl. 3, Fig. 1, ♀**).

TABLEAU DES SOUS-GENRES

1. *Antennes de la femelle de quinze articles; grand tergite avec un sillon.* 1. Subgenus Oxylabis, Förster.
— *Antennes de la femelle de quatorze articles; grand tergite sans sillon.* 2. Subgenus Acanthopsilus, Kieffer.

1. Subgenus OXYLABIS, Förster (1)

Caractères. — Antennes de la femelle de quinze articles; grand tergite avec un sillon à sa base.

Distribution géographique des espèces. — Ce sous-genre comprend vingt-quatre espèces d'Europe et d'Amérique.

1. *O. affinis*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p, 340 (1834).	Allemagne.
2. *O. afra*, Kieffer, Broteria, Vol. 6, p. 14 (1907).	Algérie.
3. *O. arcuata*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 348 (1909).	Pensylvanie.
4. *O. bifoveolata*, Brues, The Canad. Entom. Vol. 36, p. 119 (1909).	New-Jersey.
5. *O. bisulca*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 339 (1834).	Allemagne.
6. *O. californica*, Kieffer, Berl. Ent. Zeitschr. Vol. 50, p. 279 (1906).	Californie.
7. *O. canaliculata*, Kieffer, Broteria, Vol. 6, p. 9 (1907).	Italie.
8. *O. carinata*, Kieffer, ibidem, p. 13 (1907).	Allemagne.
9. *O. carinifrons*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 347 (1909).	Wisconsin.
10. *O. erythropyga*, Kieffer, Broteria, Vol. 6, p. 13 (1907).	Allemagne.
11. *O. graciliventris*, Kieffer, ibidem, p. 14 (1907).	Allemagne.
12. *O. haemorrhoidalis*, Kieffer, ibidem, p. 10 (1907).	Autriche.
13. *O. Jurinei*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 348 (1834).	Allemagne.
14. *O. Klagesi*, Kieffer, Ann. Soc. Scientif. Bruxelles. Vol. 32, p. 42 (1907).	Pensylvanie.
15. *O. leviventris*, Kieffer, Broteria, Vol. 6, p. 15 (1907).	Angleterre.
16. *O. lusitanica*, Kieffer, ibidem, p. 12 (1907).	Portugal.
17. *O maculata*, Kieffer, ibidem, p. 10 (1907).	Angleterre, Allemagne, France, Autriche.
var. semirufa, Kieffer, ibidem, p. 11 (1907).	Allemagne.
18. *O. neotropica*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p 347 (1909).	Bolivie.
19. *O. picipes*, Nees, Hym. Ichneum. Affin. Monogr. Vol 2, p. 348 (1834).	Allemagne.
20. *O. punctulata*, Kieffer, Broteria, Vol. 6, p. 11 (1907).	Angleterre.
21. *O. spinosa*, Provancher, Le Natural. Canad. Vol. 12, p. 262 (1881).	Canada.
22. *O. Strandi*, Kieffer, in Strand, Nyt Magaz. f. Naturvid. Kristiania (1910).	Norvège.
23. *O. tuberculata*, Kieffer, Broteria, Vol. 6, p. 15 (1907).	Angleterre.
24. *O variabilis*, Kieffer, ibidem, p. 13 (1907).	Allemagne.

2. Subgenus ACANTHOPSILUS, Kieffer

Acanthopsilus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 380 (1908).

Caractères. — Antennes de la femelle de quatorze articles; grand tergite sans sillon.

(1) *Cinetus armatus* Curtis, classé ici par Haliday et Dalla Torre, n'a jamais été décrit et est par suite nomen nudum.

Distribution géographique de l'espèce. — L'unique représentant de ce sous-genre est d'Europe.

1. *O.* (A.) *Marshalli*, Kieffer, Broteria, Vol. 6, p. 8 (1907). Angleterre.

11. Genus TROPIDOPSILUS, Kieffer

Tropidopsilus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 358 (1908).

Caractères. — *Femelle.* — Tête très transversale vue d'en haut, deux fois aussi haute que longue vue de côté; yeux velus, atteignant presque les mandibules, qui sont longues et croisées, comme chez *Xenotoma*. Antennes filiformes, composées de quinze articles; les articles 3-10 graduellement raccourcis, 10-14 pas plus longs que gros. Pronotum non visible d'en haut. Mesonotum très convexe, *avec quatre arêtes longitudinales*, qui longent le côté interne de quatre sillons, lobe médian plus élevé que les latéraux. Disque du scutellum plus court que la fossette basale, proéminent en forme de tubercule pyramidal. *Segment médian avec une épine* un peu arquée et plus longue que le segment lui-même; angles postérieurs avec une petite dent. Cellule radiale fermée, petite, beaucoup plus petite que la nervure marginale; stigmatique plus courte que la marginale; récurrente dirigée vers la basale. Ailes inférieures avec une cellule fermée. Pétiole un peu arqué, à peine plus court que le reste de l'abdomen, avec trois arêtes dorsales; abdomen subfusiforme, un peu déprimé, sans impression basale; sept tergites et six sternites.

Mâle inconnu.

Distribution géographique de l'espèce. — L'unique représentant de ce genre revient à l'Amérique du Sud.

1. *T. laticeps*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 338 (1909). Brésil.

12. Genus CAMPTOPSILUS, Kieffer

Camptopsilus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 359 (1908).

Caractères. — *Femelle.* — Tête très transversale vue d'en haut, plus haute que longue vue de côté; yeux velus, guère plus longs que larges; *mandibules petites.* Antennes filiformes, de quinze articles; les articles 3-14 graduellement raccourcis, le quatorzième pas plus long que gros. *Pronotum visible d'en haut, tronqué en arrière;* mesonotum convexe, lobe médian pas plus élevé que les latéraux; sillons parapsidaux convergents en arrière; scutellum à disque convexe, aussi long que la fossette basale, arrondi en arrière; segment médian avec une spinule droite, presque perpendiculaire et plus longue que le segment lui-même; angles postérieurs non proéminents. Cellule radiale fermée, plus longue que la nervure marginale; stigmatique plus courte que la marginale; récurrente arquée dès son origine et dirigée vers le milieu de la discoïdale. Ailes inférieures avec une cellule fermée. Pétiole aussi long que l'abdomen, avec trois arêtes dorsales; abdomen fusiforme, non déprimé, sans impression basale; tergites à six ou sept.

Mâle inconnu.

Distribution géographique de l'espèce. — Ce genre est fondé sur un insecte des Antilles.

1. *C. nigriceps*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 339 (1909). Cuba.

13. Genus PAROXYLABIS, Kieffer

Paroxylabis. Kieffer, Broteria, Vol. 6, p. 16 (1907).

Caractères. — Ce genre diffère d'*Oxylabis* par les caractères suivants : mandibules semblables à celles de *Xenotoma*, longues, croisées, l'une bidentée, à dent terminale longue et falciforme, l'autre tridentée, à dent terminale peu longue. Cellule radiale fermée. Pétiole avec quatre arêtes, quatre fois aussi long que gros dans les deux sexes; abdomen fusiforme, trois fois aussi long que gros au milieu.

Distribution géographique des espèces. — Ce genre comprend deux espèces d'Europe.

1. *P. fuscicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 397 (1908). Hongrie.
2. *P. semirufa*, Kieffer, Broteria, Vol. 6, p. 16 (1907). Angleterre.

14. Genus THERINOPSILUS, Kieffer

Therinopsilus. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 365 (1909).

Caractères. — *Mâle.* — Tête transversale vue d'en haut, aussi haute que longue et triangulaire vue de côté; yeux velus, deux fois aussi longs que les joues; mandibules petites. Antennes filiformes, composées de quatorze articles; troisième article échancré; tous les articles du flagellum allongés. Thorax à peine aussi haut que large; *pronotum armé de chaque côté, près du bord postérieur, d'une petite dent triangulaire et aiguë,* qui est plus distante de l'écaillette que de la ligne médiane du pronotum; propleures faiblement déprimées; sillons parapsidaux profonds; *scutellum à disque comprimé et caréné*, fossette basale grande; segment médian avec une arête simple. Cellule radiale fermée, aussi longue que la nervure marginale; stigmatique beaucoup plus courte que la marginale; récurrente continuant la direction du radius, dirigée vers la base de la basale; ailes inférieures avec une cellule fermée. Pétiole deux fois aussi long que gros, avec quatre arêtes; abdomen déprimé, ellipsoïdal, strié brièvement à la base du grand tergite; les tergites 3-5 courts; sixième plus long que le cinquième; septième en petit lobe incurvé; sternites 3-7 également courts; huitième en lobe court.

Femelle inconnue.

Type du genre : *T. pubescens,* Kieffer.

Distribution géographique des espèces. — Les deux espèces qui forment ce genre reviennent à l'Amérique du Sud.

1. *T. fuscicornis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 366 (1909). Bolivie.
2. *T. pubescens,* Kieffer, ibidem, p. 365 (1909). Brésil.

15. Genus OPAZON, Haliday

Opazon. Haliday, Nat. Hist. Review, p. 170 (1857),
Belyta (part.). Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 179 (1858).
Psilomma (non Förster). Dalla-Torre, Cat. Hym. Vol. 5, p. 452 (1898).

Caractères. — Mandibules proéminentes en bec; yeux probablement glabres. Palpes courts. Antennes de quinze articles chez la femelle, le quatrième pas plus long que l'avant-dernier; celles du mâles de quatorze articles. Segment médian court, angles postérieurs non proéminents. Ailes dépour-

vues de nervure médiane, de récurrente, de discoïdale et d'anale; marginale aussi longue que la basale. Pétiole court, pas plus long que les hanches postérieures.

Distribution géographique des espèces. — Ce genre comprend deux espèces d'Europe.

1. *O. ciliatum*, Thomson (*parvulum*, Haliday?), Oefv. Svensk. Akad. Förh. Vol. 15, p. 179 (1858). Suède, Angleterre.
2. *O. incrassatum*, Thomson, ibidem, p. 179 (1858). — Suède.

16. Genus RHYNCHOPSILUS, Kieffer

Acropiesta ♂ (non ♀). Förster, Hym. Stud. Vol. 2, p. 129, 135 (1856).
Pantolyta (non Förster) Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 383 (1893).
Rhynchopsilus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 360 (1908).

Caractères. — Tête vue d'en haut subglobuleuse, vue de côté bien plus haute que longue; bouche prolongée en un bec vertical qui égale le tiers de la hauteur de la tête (**Pl. 1, Fig. 2**); mandibules droites et parallèles (**Pl. 2, Fig. 13**); yeux glabres, circulaires, situés au haut de la tête, à peine plus longs que la moitié des joues. Palpes longs. Antennes de quinze ou de quatorze articles; scape cylindrique, aussi long que les trois (♀) ou deux (♂) articles suivants réunis, son extrémité prolongé en deux petites spinules parallèles; troisième article de la femelle plus mince que le deuxième, cylindrique, deux fois aussi long que gros; quatrième à peine plus long que gros; 6-14 subglobuleux et graduellement un peu grossis; quinzième ovoïdal; troisième article du mâle arqué à sa base, plus long que le quatrième, 4-13 trois fois aussi longs que gros, quatorzième quatre fois. Pronotum non visible d'en haut; mésothorax aussi long que haut; sillons parapsidaux percurrents; scutellum très convexe, avec une fossette transversale à sa base; segment médian avec trois arêtes simples, angles postérieurs à peine proéminents. Ailes antérieures avec une costale, une sous-costale, une basale, une médiane, une longue marginale, une stigmatique et une radiale, ces deux dernières très courtes et peu marquées chez le type; cellule radiale ouverte au bord, ou très petite et fermée. Ailes inférieures du type sans nervure. Pétiole strié, presque aussi long que gros chez la femelle, un peu plus long chez le mâle; abdomen un peu déprimé, strié à l'extrême base, terminé chez la femelle en une pointe conique un peu incurvée et faiblement comprimée; deuxième tergite dépassant un peu le milieu de l'abdomen; 3-7 très petits; huitième plus long que les trois précédents réunis; tarière longuement proéminente.

Type du genre : *R. apertus*, Kieffer.

TABLEAU DES SOUS-GENRES

1. *Cellule radiale fermée, ailes inférieures avec une cellule* . . . . 3. Subgenus Promeuselia, nov. subg.
— *Cellule radiale ouverte* . . . . . 2.
2. *Antennes de quinze articles* (♀); *ailes inférieures sans nervure.* . 1. Subgenus Rhynchopsilus, Kieffer.
— *Antennes de quatorze articles* (♀); *ailes inférieures avec une cellule* . . . . . 2. Subgenus Atelopsilus, Kieffer.

1. Subgenus RHYNCHOPSILUS, Kieffer

Caractères. — Antennes de quinze articles (♀); radius très court; ailes inférieures sans nervure.

Distribution géographique de l'espèce. — L'unique représentant de ce sous-genre est d'Europe.

1. *R. apertus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 402 (1908). Italie.

2. Subgenus ATELOPSILUS, Kieffer

Pantolyta (non Förster). Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 383 (1893).
Atelopsilus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 360 (1908).

Caractères. — Antennes de la femelle de quatorze articles moniliformes, graduellement épaissies; marginale aussi longue que la basale, radius long, n'atteignant pas le bord; cellule radiale ouverte. Ailes inférieures avec une cellule fermée.

Distribution geographique de l'espèce. — Ce sous-genre est fondé sur un insecte des Etats-Unis.

1. *R.* (*A.*) *bruneus*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 383 (1893). Virginie.

3. Subgenus PROMEUSELIA, nov. subgen.

Rhynchopsilus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 403 (1908).
Meuselia (part.). Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 392 (1909).

Distribution géographique de l'espèce. — L'unique représentant de ce sous-genre est d'Europe.

1. *R.* (*P.*) *clausus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 403 (1908). Allemagne.

17. Genus DIPHORA, Förster

Diphora. Förster, Hym. Stud. Vol. 2, p. 130, 140 (1856).

Caractères. — *Femelle.* — Tête, vue d'en haut, transversale et subtriangulaire; vue de côté, plus haute que longue et triangulaire; yeux velus et allongés. Scape cylindrique, plus gros que les articles suivants, à peine plus long que le troisième article; celui-ci subcylindrique et aussi long que les huit articles suivants réunis; articles 4-14 subglobuleux, à peine transversaux, quinzième ovoïdal. Pronotum aminci en ligne; sillons parasidaux profonds; scutellum allongé, arrondi en arrière, avec une fossette circulaire en avant; segment médian avec trois arêtes simples, angles postérieurs proéminents sous forme de dent. Ailes antérieures à nervation complète; marginale plus courte que la stigmatique, qui est oblique; cellule radiale fermée, quatre fois aussi longue que la nervure marginale, dépassée par la postmarginale, récurrente arquée, dirigée vers la discoïdale; ailes inférieures avec une nervure médiane bifurquée. Pétiole strié, guère plus long que gros; abdomen déprimé, faiblement fusiforme; deuxième tergite occupant les deux tiers antérieurs, sa base striée fortement et avec un sillon longitudinal; troisième tergite conique, quatrième et cinquième petits, à peine distincts; le sixième semblable à un petit stylet (**Pl. 2, Fig. 1, ♀**).

Type du genre : *D. Westwoodi* Kieffer, insecte nommé mais non décrit par Förster.

Distribution géographique des espèces. — Ce genre se compose de quatre espèces d'Europe.

1. *D. monticola*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 414 (1908). Lorraine, Alsace.
2. *D. nigriceps*, Kieffer, ibidem, p. 415 (1908). Ecosse.
3. *D. rufiventris*, Kieffer, ibidem, p. 415 (1908). Ecosse.
4. *D. Westwoodi*, Kieffer, ibidem, p. 414 (1908). Allemagne.

18. Genus ACANOSEMA, Kieffer

Psilomma (non Förster). Cameron, Trans. Ent. Soc. Lond. p. 557 (1881).
Acanosema. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 407 (1908).

Caractères. — Tête, vue d'en haut, transversale chez le mâle, subglobuleuse chez la femelle. Yeux glabres, atteignant à peine la moitié de la longueur des joues. Scape un peu évasé à l'extrémité qui porte, de chaque côté, une petite spinule. Propleures et métapleures avec un feutrage gris, formant collier, comme chez les Diapriides. Pétiole du mâle subcylindrique, allongé, non tronqué, mais aminci aux deux bouts, lisse et brillant; pétiole de la femelle pas plus long que gros, proéminent dorsalement en forme de cœur; abdomen déprimé, un peu incurvé à l'extrémité; grand sternite non distinctement prolongé en sac en avant; grand tergite occupant les deux tiers antérieurs, strié à sa base; tergites 3-7 également courts, le troisième triangulaire. Quant au reste, semblable à *Cardiopsilus* (**Pl. 2, Fig. 16,** ♀).

Distribution géographique des espèces. — Ce genre renferme cinq espèces d'Europe.

1. *A. alpestre*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 412 (1908). Italie.
2. *A. brevipenne*, Kieffer, ibidem, p. 408 (1908). Espagne.
3. *A. caudatum*, Cameron, Trans. Ent. Soc. Lond. p. 557 (1881). Espagne.
4. *A. Reitteri*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 393 (1909). Herzégovine.
5. *A. rufum*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 411 (1908). Bosnie.

19. Genus CARDIOPSILUS, Kieffer

Cardiopsilus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 405 (1908).

Caractères. — *Femelle.* — Tête, vue de côté, plus haute que longue, un peu triangulaire; vue d'en haut, subglobuleuse chez la femelle. Yeux velus, aussi longs que les joues. Scape inerme; troisième article plus long que le deuxième et que le quatrième; 7-14 pas plus longs que gros et graduellement un peu grossis. Pronotum non visible d'en haut, sans feutrage, situé plus bas que le mesonotum; sillons parapsidaux percurrents; fossette basale du scutellum un peu transversale; metanotum égal à la moitié du scutellum; segment médian avec une carène médiane et une arête de chaque côté. Ailes antérieures à nervation complète; radiale beaucoup plus longue que la marginale et atteignant presque le bord, récurrente courbée à l'extrémité; ailes inférieures avec une cellule basale fermée. Pétiole pas plus long que gros, proéminent en cœur sur le dessus; abdomen ni comprimé ni déprimé, terminé en une pointe conique; grand tergite occupant les deux tiers antérieurs, sans sillon ni stries; 3-6 également courts, septième aussi long que les quatre précédents réunis; tarière longuement proéminente; base du deuxième sternite prolongé en sac, en avant (**Pl. 2, Fig. 12**); aux tergites 3-6 correspondent seulement trois sternites.

Distribution géographique des espèces. — Les deux espèces qui forment ce genre reviennent à l'Europe.

1. *C. productus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 407 (1908). Autriche.
2. *C. rufiventris*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 302 (1909). Ecosse.

20. Genus PSILOMMA, Förster

Psilomma (non Ashmead). Förster, Hym. Stud. Vol. 2, p. 128 (1856).

Caractères. — Tête transversale vue d'en haut, plus haute que longue vue de côté; yeux glabres, un peu plus longs que les joues; mandibules non proéminentes en bec, se recouvrant, l'une

divisée à l'extrémité par une incision aiguë en deux lobes triangulaires, l'autre divisée par deux incisions aiguës en trois lobes triangulaires (**Pl. 2, Fig. 8, 9**). Palpes maxillaires de cinq articles, les labiaux de trois. Scape inerme, chez le mâle un peu plus court que le troisième article qui est plus long que le quatrième et échancré à sa base, quatrième trois à quatre fois aussi long que gros, les suivants faiblement raccourcis, le treizième encore plus de deux fois aussi long que gros, un peu plus court que le quatorzième; scape de la femelle aussi long que les quatre articles suivants réunis, troisième article presque deux fois aussi long que gros, 4-6 cylindriques et un peu plus longs que gros, 7-14 globuleux et un peu grossis, quinzième ovoïdal. Prothorax tronqué en avant, non visible d'en haut; sillons parapsidaux profonds; base du scutellum avec une fossette; segment médian avec trois arêtes, angles postérieurs en forme de dent. Ailes antérieures (**Pl. I, Fig. 7**) avec une costale, une sous-costale, une basale, une médiane, une longue marginale, une courte stigmatique et une récurrente parallèle à la basale; radiale nulle; discoïdale et anale plus ou moins marquées; ailes inférieures avec une cellule basale fermée. Pétiole mince, strié ou coriacé, au maximum deux fois aussi long que gros; abdomen subfusiforme ou en ellipse allongé, de huit tergites et huit sternites.

Type du genre : *P. tenuicornis*, Kieffer.

Distribution géographique des espèces. — Ce genre comprend huit espèces propres à l'Europe.

1. *P. atriceps*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 422 (1908). — Angleterre.
2. *P. crassicornis*, Kieffer, ibidem, p. 425 (1908). — France.
   var. fuscicornis, Kieffer, ibidem, p. 425 (1908). — France.
3. *P. dubia*, Kieffer, ibidem, p. 426 (1908). — Ecosse.
4. *P. flavipes*, Kieffer, ibidem, p. 423 (1908). — Ecosse.
5. *P. incerta*, Kieffer, ibidem, p. 420 (1908). — Ecosse.
6. *P. nigra*, Kieffer, ibidem, p. 424 (1908). — France.
7. *P. radiata*, Kieffer, ibidem, p. 424 (1908). — Hongrie.
8. *P. tenuicornis*, Kieffer, ibidem, p. 421 (1908). — Allemagne.

21. Genus ACANOPSILUS, Kieffer

Acanopsilus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 426 (1908).

Caractères. — Tête de la femelle, vue d'en haut, aussi longue que large, amincie en avant jusqu'à l'insertion des antennes; vue de côté, triangulaire et aussi haute que longue; yeux glabres, plus courts que les joues; mandibules courtes et se couvrant. Palpes maxillaires longs. Antennes de quatorze articles chez la femelle, avec une massue de six articles; scape grêle, avec deux spinules à l'extrémité, aussi long que les cinq articles suivants réunis; troisième article à peine plus long que le deuxième, aussi mince que les trois suivants, 4-6 cylindriques, à peine plus longs que gros, 9-13 presque transversaux. Chez le mâle, le troisième article antennaire est échancré; articles du flagellum plus de deux fois aussi longs que gros; scape bispinuleux, aussi long que les articles 2 et 3 réunis. Thorax un peu plus long que haut; pronotum perpendiculaire, non distinct d'en haut; sillons parapsidaux profonds; scutellum très convexe, avec une fossette à sa base; segment médian avec une carène médiane découpée en arc sur toute sa longueur. Nervation alaire comme chez *Psilomma*, sauf que la récurrente est moins longue et qu'on voit un vestige de la radiale. Ailes inférieures à cellule basale fermée. Pétiole de la femelle à peine plus long que gros, cylindrique, avec quatre arêtes; abdomen fusiforme, un peu plus large que haut, tiers apical en cône pointu; base du grand tergite striée; tergites 3-6 d'égale longueur, septième long et pointu; le deuxième sternite atteint la base du quatrième tergite; sternite 3-5 d'égale

longueur, sixième ou dernier égal au septième tergite. Chez le mâle, le pétiole est presque deux fois aussi long que gros; abdomen aminci aux deux bouts.

Distribution géographique des espèces. — Les quatre espèces sont spéciales à l'Europe.

1. *A. arcuatus*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 393 (1909). Italie, Hongrie.
2. *A. brevinervis*, Kieffer, ibidem, p. 393 (1909). Ecosse.
3. *A. clavatus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 427 (1908). Autriche, Italie.
4. *A. laticeps*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 393 (1909). Italie.

22. Genus PANTOLYTA, Förster

Belita (part.). Haliday, Nat. Hist. Review, Vol. 4, p. 169 (1857).
Cinetus (part.). Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 165 (1858).
Pantolyta (non Ashmead). Förster, Hym. Stud. Vol. 2, p. 128 (1856).

Caractères. — Tête globuleuse, vue d'en haut; subtriangulaire et un peu plus haute que longue, vue de côté; mandibules de l'espèce typique inégales et se couvrant, l'une avec une dent obtuse en son milieu, l'autre avec deux courtes dents obtuses situées au-dessus du milieu. Palpes maxillaires de cinq articles, les labiaux de deux. Yeux velus, un peu plus courts que les joues. Antennes du mâle de quatorze articles, dont le troisième est tantôt échancré ou denté, tantôt sans échancrure et sans dent. Antennes de la femelle de quinze articles, dont les derniers sont un peu épaissis; articles 5-14 globuleux, le quinzième ovoïdal. Thorax plus haut que large; pronotum vertical, non visible d'en haut; sillons parapsidaux profonds; base du scutellum avec une fossette; segment médian avec trois arêtes simples. Cellule radiale non fermée, radius très court et pas plus long que la stigmatique, récurrente très courte et parallèle au bord. *Ailes postérieures très étroites, sans cellule basale.* Pétiole au maximum deux fois aussi long que gros; abdomen du mâle en ellipse allongée, un peu déprimé, faiblement incurvé à l'extrémité, de huit tergites; abdomen de la femelle fusiforme, de six tergites, dont le deuxième occupe les deux tiers antérieurs, 3-5 très courts et graduellement amincis, sixième conique et plus long que les trois précédents réunis; tarière proéminente.

Type du genre : *P. pallida* Kieffer, de la collection de Förster, *P. atrata* Förster étant insuffisamment décrit (**Pl. 1, Fig. 1, 10**).

Distribution géographique des espèces. — Les huit ou neuf espèces formant ce genre reviennent à l'Europe.

1. *P. atrata*, Förster, Progr. Realsch. Aachen, p. 43 (1861). Suisse.
2. *P. fuscipes*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 431 (1908). Hongrie.
3. *P. incrassata*, Kieffer, ibidem, p. 433 (1908). Allemagne.
4. *P. nervosa*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 165 (1858). Suède.
5. *P. pallida*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 430 (1908). Angleterre, Allemagne, Autriche, France.
6. *P. semirufa*, Kieffer, ibidem, p. 432 (1908) Lorraine.
7. *P. stylata*, Kieffer, ibidem, p. 433 (1908). Allemagne, Angleterre.
8. *P. sublilis*, Kieffer, ibidem, p. 432 (1908). Allemagne.

— *P.? heterocera*, Haliday, Nat. Hist. Review, Vol. 4, p. 169 (1857). Angleterre.

23. Genus PROBELYTA, Kieffer

Probelyta. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 364 (1909).

Caractères. — *Femelle.* — Tête à peine plus large que longue, vue d'en haut; un peu plus haute

que longue, vue de côté; yeux velus, aussi longs que les joues; mandibules petites. Antennes de quinze articles; les articles 3-5 graduellement raccourcis, 5-14 pas plus longs que gros. Thorax aussi large que haut; pronotum visible d'en haut; mesonotum convexe sur le lobe médian, déprimé sur les lobes latéraux; scutellum arrondi en arrière; segment médian avec une arête simple *Ailes sans nervure médiane; basale indiquée seulement par un court vestige* ou trait brunâtre; marginale ponctiforme; *stigmatique nulle; radius sortant* de la marginale et formant un trait parallèle au bord antérieur de l'aile; sans autres nervures; ailes inférieures avec une cellule fermée. Pétiole deux fois aussi long que gros, avec quatre arêtes dorsales; abdomen ellipsoïdal, déprimé; tergites 3-6 également courts; septième plus long.

Mâle inconnu.

Distribution géographique de l'espèce. — Ce genre est établi sur un insecte de l'Amérique du Sud.

1. *P. alticola*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 365 (1909). Pérou.

24. Genus BELYTA, Jurine

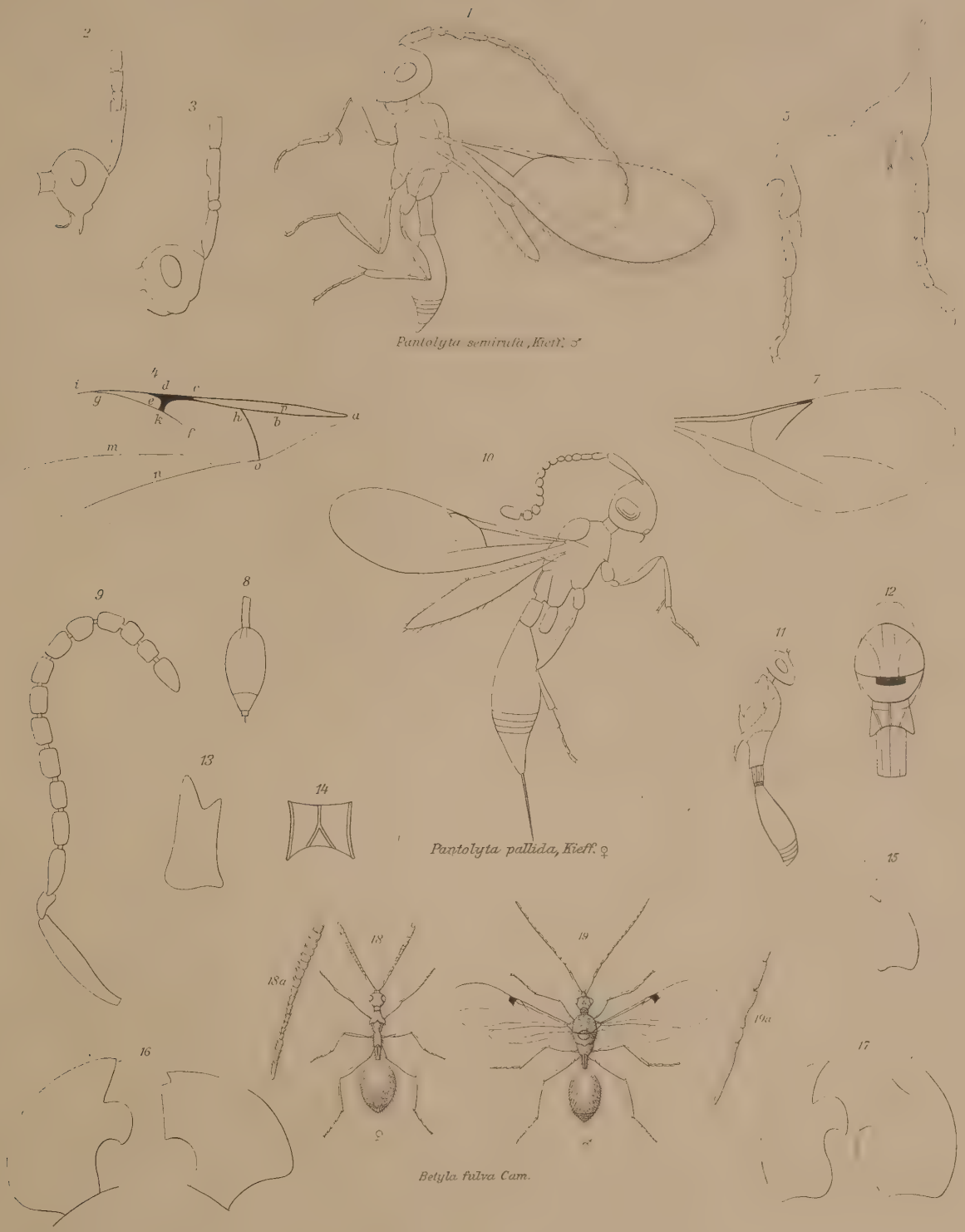
Belyta. Jurine, Nouv. Méth. Class Hym. p. 311 (1807).
? **Psilus** (**Belyta**). Zetterstedt, Insect. Lappon. Vol. 1, p. 415 (1838).

Caractères. — Tête, vue de côté, ordinairement plus longue ou aussi longue que haute chez la femelle, triangulaire et plus haute que longue chez le mâle; yeux velus; mandibules inégales, l'une avec une dent au-dessus du milieu, l'autre divisée à l'extrémité en deux dents triangulaires et armée d'une petite dent au milieu. Palpes maxillaires de cinq articles, les labiaux de trois. Scape inerme; articles 4-14 pas plus longs que gros chez la femelle, quinzième ovoïdal; troisième article du mâle échancré. Thorax de la femelle déprimé, plus large que haut, avec le pronotum ordinairement assez long et horizontal; thorax du mâle convexe, pas plus large que haut, à pronotum court et non de niveau avec le mesonotum; sillons parapsidaux profonds; base du scutellum avec une fossette; *arête médiane du segment médian bifurquée en arrière*, formant ordinairement une aire triangulaire (**Pl. 1, Fig. 14**). Cellule radiale ouverte ou fermée; récurrente dirigée vers la basale; ailes inférieures avec une cellule basale fermée. Pétiole subcylindrique, au maximum deux fois aussi long que gros; abdomen déprimé, beaucoup plus large que haut, un peu aminci aux deux bouts; chez la femelle, les tergites 7 et 8 sont souvent connés, ordinairement horizontaux et forment ensemble un triangle qui est environ aussi long que les trois tergites précédents réunis; tergites 3-5 d'égale longueur; sternites au nombre de six. Chez le mâle, les tergites et les sternites sont au nombre de huit, dernier tergite un peu incurvé. Les mâles de ce genre ne peuvent guère être distingués de *Aclista* que par l'arête bifurquée du segment médian (**Pl. 3, Fig. 2, ♂**).

Type du genre : *B. bicolor*, Jurine, qui est insuffisamment décrit.

Distribution géographique des epèces. — Ce genre comprend soixante-quatorze espèces d'Europe et d'Amérique, dont dix, marquées d'un point d'interrogation, sont probablement à rapporter à un autre genre, mais insuffisamment décrites.

1. *B. abdominalis*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 344 (1834). Allemagne, Suisse.
2. *B. abrupta*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 168 (1858). Suède.
3. *B.* ? *acuminata*, Zetterstedt, Insect. Lappon. Vol. 1, p. 415 (1838). Laponie.
4. *B. acuta*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 510 (1909). Suisse.
5. *B. alticeps*, Kieffer, ibidem, p. 488 (1909). France.
6. *B. arcuata*, Kieffer, ibidem, p. 505 (1909). France.
7. *B. arietina*, Kieffer, ibidem, p. 492 (1909). France.
   var. brevipennis, Kieffer, ibidem, p. 492 (1909). Allemagne.
   var. erythrocera, Kieffer, ibidem, p. 492 (1909). Allemagne.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Pantolyta semirufa, Kieff. ♂
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Pantolyta pallida, Kieff. ♀
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19a
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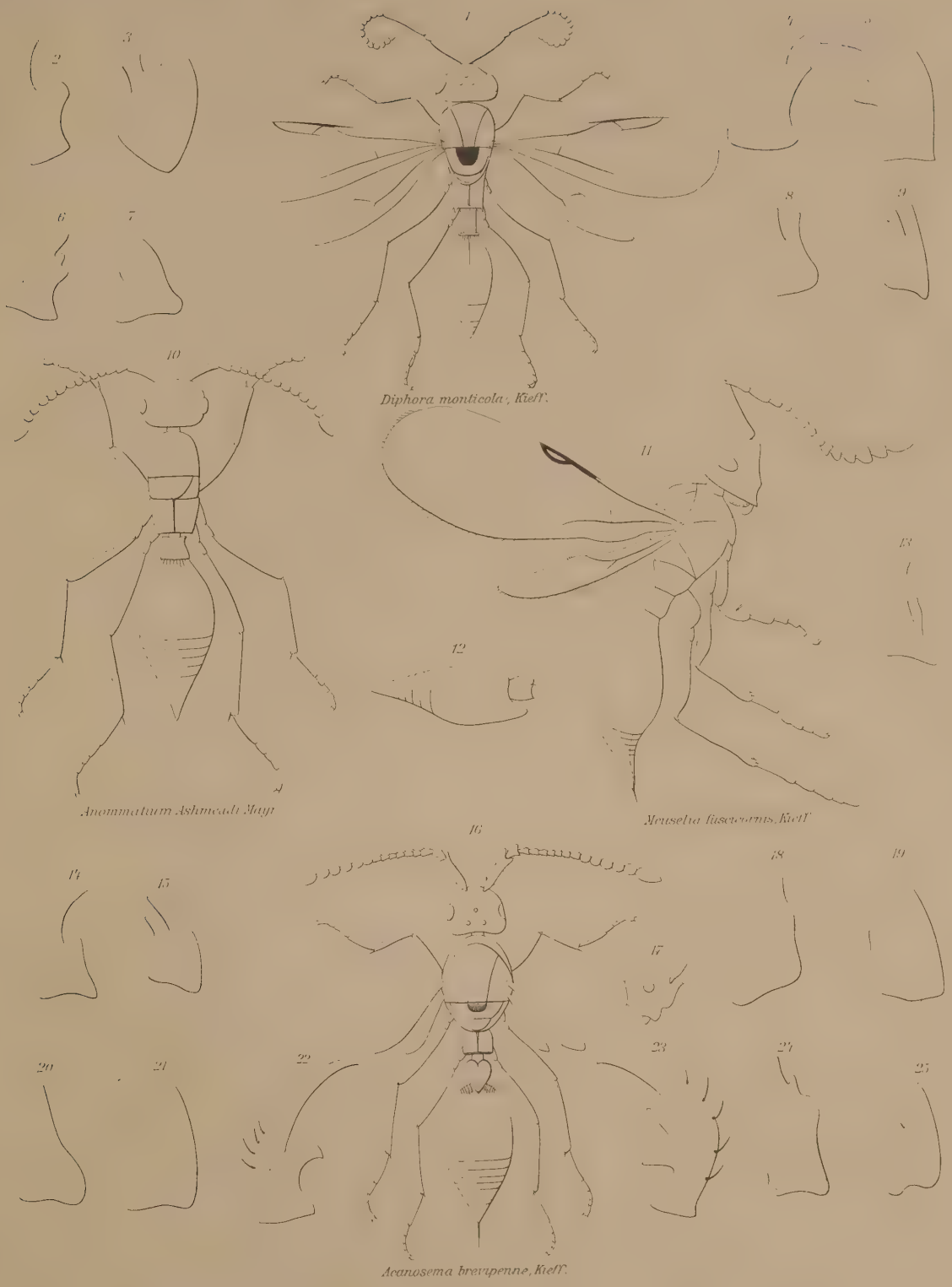
♀
♂
Belyta fulva Cam.

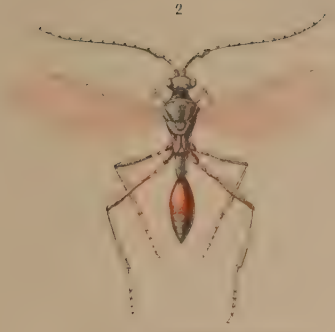


FAM. BELYTIDÆ.

1

Oxylabis punctulata Kieff. ♀

2



Belyta sanguinolenta, Nees ♂

3

Anectata angusta, Kieff. ♂

4

Aclista ♂

5

Pantoclis brachyura, Thoms. ♀

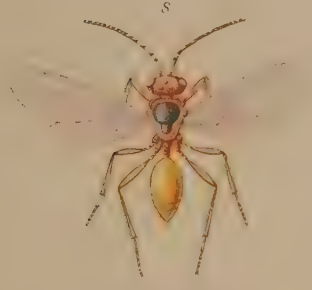
6

Pantoclis flavirentris Kieff. ♀

7

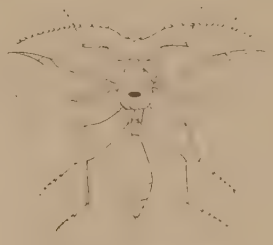
Aclista. ♀

8



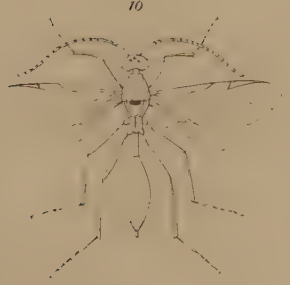
Ismarus dorsiger, Curt

9



Xenoloma nigriceps Kieff. ♀

10



Cinetus iridipennis Lep. ♀

11

Leptorhaptus fungorum, Kieff. ♀

12

Miota luteipes, Kieff. ♀

FAM. BELYTIDÆ

8. *B. atriceps*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 502 (1909). Autriche.
9. *B. bicolor*, Jurine, Nouv. Méth. Class. Hym. p. 311 (1807). Suisse.
10. *B. bidentata*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 497 (1909). France.
11. *B. bisulcata*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 32, p. 43 (1907). Pensylvanie.
12. *B.? boleti*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 338 (1834). Allemagne.
13. *B. brevifrons*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 388 (1909). Hongrie.
14. *B. brevinervis*, Kieffer, ibidem, p. 508 (1909). France.
15. *B.? brevis*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 343 (1834). Allemagne.
16. *B. californica*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 363 (1909). Californie.
17. *B.? congener*, Zetterstedt, Insect. Lappon. Vol. 1, p, 415 (1838). Laponie.
18. *B. contempta*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 361 (1909). Pensylvanie.
19. *B. costalis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 511 (1909). Russie, Hongrie, Autriche, Italie, France, Allemagne, Ecosse.
    - *var. armata*, Kieffer, ibidem, p. 511 (1909). Angleterre, France, Italie.
    - *var. cataniensis*, Kieffer, ibidem, p. 512 (1909). Sicile.
    - *var. divergens*, Kieffer, ibidem, p. 511 (1909). Autriche, France.
    - *var. fusciscapa*, Kieffer, ibidem, p. 512 (1909). Autriche.
    - *var. helvetica*, Kieffer, ibidem, p. 511 (1909). Suisse.
    - *var. insularis*, Kieffer, ibidem, p. 511 (1909). Ile de Giglio.
    - *var. obliterata*, Kieffer, Broteria, Vol. 6, p. 19 (1907). Ecosse.
    - *var. vanescens*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 511 (1909). France, Italie.
20. *B. crassinervis*, Kieffer, ibidem, p. 509 (1909) France.
    - *var. scotica*, Kieffer, ibidem, p. 509 (1909). Ecosse.
21. *B. depressa*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 169 (1858). Suède, Angleterre, Ecosse, Allemagne, France.
    - *var. cursitans*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 486 (1909). Suède, Ecosse, France.
22. *B. despecta*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 362 (1909). Wisconsin.
23. *B. dorsalis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 169 (1858). Suède.
    - *var. Thomsoni*, Kieffer (*sanguinolenta*, Thomson nec Nees), ibidem, p. 166 (1858). Suède.
24. *B. elegans*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 504 (1909). France.
25. *B.? elongator*, Zetterstedt, Insect. Lappon. Vol. 1, p. 174 (1858). Laponie.
26. *B. erythropa*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 357 (1893). Wisconsin.
27. *B. evanescens*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 493 (1909). Hongrie.
28. *B.? excisor*, Zetterstedt, Insect. Lappon. Vol. 1, p. 415 (1838). Laponie.
29. *B. forticornis*, Cameron, Proc. Nat. Hist. Soc. Glasgow (2), Vol. 1, Pt. 3, p. 301 (1886). Angleterre.
30. *B. frontatis*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 356 (1893). Delaware.
31. *B. furcata*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 489 (1909). Italie, île Giglio.
32. *B.? fusca*, Zetterstedt, Insect. Lappon. Vol. 1, p. 416 (1838). Laponie.
33. *B.? fuscicornis*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 340 (1834). Allemagne.
34. *B. Gaullei*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 503 (1909). France.
35. *B. germanica*, Kieffer in Strand, Nyt Magaz. f. Naturvid. Kristiania (1910). Allemagne.
36. *B. incisa*, Zetterstedt, Insect. Lappon. Vol. 1, p. 415 (1838). Laponie.
37. *B. infuscata*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 361 (1909). Pensylvanie.
38. *B. Klagesi*, Kieffer, ibidem, p. 362 (1909). Pensylvanie.
39. *B. lativentris*, Cameron, Proc. Nat. Hist. Soc. Glasgow (2), Vol. 1, Pt. 3, p. 301 (1886). Angleterre.
40. *B. longifurca*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 500 (1909). Autriche.
41. *B. longistilus*, Kieffer, ibidem, p. 514 (1909). France.
42. *B. lubrica*, Kieffer, ibidem, p. 499 (1909). Allemagne.
43. *B. marginalis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 485 (1909). Ecosse.

44. *B. modesta*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 516 (1909).	Ecosse.
45. *B. moniliata*, Cameron, Proc. Nat. Hist. Soc. Glasgow (2), Vol. 1, Pt. 3, p. 303 (1886).	Angleterre.
46. *B. monilicornis*, Ashmead, Bull. I, Colorad. Biol. Assoc. p. 12 (1890).	Colorado.
47. *B. mullensis*, Cameron, Proc. Nat. Hist. Soc. Glasgow (2), Vol. 1, Pt. 3, p. 304 (1886)	Angleterre.
48. *B. nigriceps*, Cameron, Trans. Ent. Soc. Lond. p. 195 (1883).	Angleterre.
49. *B nigripes*, Kieffer, Berl. Ent. Zeitschr. Vol. 50, p. 280 (1906).	Californie.
50. *B. nigriventris*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 167 (1858).	Suède.
51. *B. norvegica*, Kieffer in Strand, Nyt Magaz. f. Naturvid. Kristiania (1910).	Norvège.
52. *B. ? obscura*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 344 (1834).	Allemagne, Angleterre.
53. *B. petiolaris*, Nees (non Thomson), ibidem, p. 338 (1834).	Allemagne.
54. *B. proxima* nom. nov. (*affinis*, Kieffer non Nees) in Ern. André, Spec. Hym. Eur. Vol. 10, p. 505 (1909).	France.
55. *B. quadridens*, Kieffer, ibidem, p. 483 (1909).	France, Hongrie, Roumélie.
var. festiva, Kieffer, ibidem, p. 483 (1909).	France.
var. inermis, Kieffer, ibidem, p. 483 (1909).	Autriche.
56 *B. quadrispinosa*, Kieffer, ibidem, p. 496 (1909).	Autriche.
57. *B. rufa*, Kieffer, ibidem, p. 491 (1909).	Autriche.
58. *B. rufipes*, Kieffer, Berl. Ent. Zeitschr. Vol. 50, p, 280 (1906).	Nicaragua.
59. *B. rugosicollis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol, 10, p. 490 (1909).	France.
60. *B. sanguinolenta*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 341 (1834).	Allemagne.
61. *B. sexcarinata*, Kieffer, in Ern. André. Spec. Hym. Eur. Vol. 10, p. 501 (1909).	France, Suisse.
62. *B. sicula*, Kieffer, ibidem, p. 515 (1909).	Sicile.
var. flavipennis, Kieffer, ibidem, p. 515 (1909).	Autriche.
63. *B. striativentris*, Kieffer, ibidem, p. 498 (1909).	Hongrie.
64. *B. sulcata*, nom. nov. (*bisulcata*), Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 360 (1909).	Pensylvanie.
65. *B. tenuicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 512 (1909).	Autriche.
66. *B. tenuistilus*, Kieffer, ibidem, p. 513 (1909).	Ecosse.
67. *B. texana*, Ashmead. Bull. U. S. Nat. Mus. Vol. 45, p. 357 (1893).	Texas.
68. *B. tripartita*, Kieffer in Ern. André, Spec. Hym. Eur Vol. 10, p. 495 (1909).	France, Allemagne, Autriche, Italie.
69. *B. validicornis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 168 (1858).	Suède.
70. *B. vera*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 362 (1909).	Wisconsin.
71. *B. vilis*, Kieffer, ibidem, p. 363 (1909).	Pensylvanie.
72. *B. xanthopa*, Kieffer, ibidem, p. 364 (1909).	Wisconsin.
var. assimilis, Kieffer, ibidem, p. 364 (1909).	Pensylvanie.
73. *B. xanthostoma*, Kieffer, ibidem, p. 363 (1909).	Pensylvanie.
74. *B. ? Zetterstedti*, Dalla Torre (*affinis*, Zetterstedt non Nees), Insect. Lappon. Vol. 1, p. 415 (1838).	Laponie.

25. Genus PARACLISTA, Kieffer

Belyta (part.). Thomson, Oefv. Svensk. Akad, Förh. Vol. 15, p. 167 (1858).
Paraclista. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 476 (1909).

Caractères. — *Femelle.* — Tête, vue de côté, plus longue ou au moins aussi longue que haute. Articles antennaires 4-14 pas plus longs que gros, quinzième ovoïdal. Thorax déprimé, plus large que haut; pronotum prolongé en avant et situé à peu près dans le même plan que le mesonotum. Arête médiane du segment médian non bifurquée Cellule radiale ouverte ou fermée. Les autres caractères sont ceux de *Belyta*.

Mâle inconnu, probablement à chercher dans les genres *Alista* et *Pantoclis*.

Type du genre : *P. brachyptera*, Thomson.

Distribution géographique des espèces. — Ce genre comprend neuf espèces d'Europe.

1. *P. brachyptera*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 167 (1858). Suède, Angleterre, Allemagne, France, Autriche.
   var. halterata, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 481 (1909). Autriche.
   var. nervosa, Kieffer, ibidem, p. 481 (1909). France.
2. *P. carinifrons*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 390 (1909). France.
3. *P. fuscipennis*, Thomson, Oefv. Svensk. Akad. Förh. Vol 15, p. 168 (1858). Suède.
4. *P. longicollis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 391 (1909). Hongrie.
5. *P. longifrons*, Kieffer, ibidem, p. 390 (1909). Autriche.
6. *P. oreiplana*, Kieffer in Strand, Nyt Magaz. f. Naturvid. Kristiania (1910). Norvège.
7. *P. pedestris*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 480 (1909). Ecosse.
8. *P. producticeps*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 391 (1909). France.
9. *P. sulcigera*, Kieffer, ibidem, p. 390 (1909). Italie.

26. Genus ACLISTA, Förster

Cinetus (part.). Curtis, Brit. Ent. Vol. 8, p. 380 (1831).
Aclista. Förster, Hym. Stud. Vol. 2, p. 128, 131, 135 (1856).
Belyta (part.). Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 175 (1858).
Zygota. Förster, Hym. Stud Vol. 2, p. 128, 131, 135 (1856).
Pantoclis (part.). Marshall, Cat. Brit. Hym. Oxyura, p. 9, n° 1 (1873).
? **Psilomma.** Ashmead (non Förster), Bull. U. S. Nat. Mus. Vol. 45, p. 379 (1893).
Carinia. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 29, p. 140 (1905).
Tetrapsilus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 397 (1908).

Caractères. — Tête, vue de côté, aussi haute ou plus haute que longue (**Pl. I, Fig. 3**); yeux velus; mandibules petites, obtuses, sans dent ou avec une petite dent obtuse, chez une espèce (*holotoma*) longues, croisées et conformées comme chez *Xenotoma*. Palpes maxillaires de cinq articles, les labiaux de trois. Chez la femelle, les articles 3 et 4 des antennes sont plus longs que gros, les suivants globuleux ou transversaux, sauf le quinzième qui est ovoïdal. Troisième article du mâle échancré, les suivants cylindriques et pubescents. Pronotum presque perpendiculaire, chez les espèces subaptères un peu prolongé; mesonotum convexe, sillons parapsidaux profonds; parfois encore deux sillons en avant, entre les parapsidaux (*Tetrapsilus* Kieffer); base du scutellum avec une fossette; segment médian à arête médiane non bifurquée, angles postérieurs ordinairement proéminents. Ailes tantôt raccourcies, tantôt normales et alors avec une cellule radiale ouverte; marginale ordinairememt épaissie, tantôt plus longue, tantôt plus courte que la cellule radiale; récurrente dirigée vers la basale ou indistincte; ailes inférieures avec une cellule fermée. Pétiole cylindrique, strié, au maximum deux fois aussi long que gros; abdomen plus fortement convexe ventralement que dorsalement, pointu en arrière chez la femelle, composé de sept tergites, y compris le pétiole, tergites 3-5 également courts, tarière souvent proéminente (**Pl. 3, Fig. 4, ♂; Fig. 7, ♀**).

Le genre *Zygota* Förster, synonyme de *Aclista*, est fondé sur un caractère qui n'existe que pour les mâles et qui est très variable; les tibias antérieurs des mâles sont tantôt échancrés dans la moitié distale, tantôt armés d'une grosse dent ou d'une spinule ou de soies dressées et groupées sur le devant au milieu; leur cellule radiale est tantôt très longue, tantôt très courte, tout comme chez les espèces à tibias antérieurs inermes et sans échancrure. Je réunis à ce genre l'insecte décrit par Ashmead sous le nom de *Psilomma columbianum*, qui, à cause des yeux glabres et de l'échancrure du quatrième article antennaire du mâle, doit peut-être former un genre nouveau.

Distribution géographique des espèces. — Les soixante-douze espèces reviennent à l'Europe, à l'Afrique, à l'Asie et à l'Amérique du Nord.

1. *A. americana*, Ashmead, The Canad. Entom. Vol. 20, p. 54 (1888).	Canada, Alaska.
2. *A. arcuata*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 349 (1909).	Pensylvanie.
3. *A. aerolata*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 445 (1908).	Ecosse.
4. *A. australiensis*, Kieffer, Berl. Ent. Zeitschr. Vol. 51, p. 264 (1907).	Australie.
5. *A. borealis*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 378 (1893).	Canada.
6. *A. brevicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 451 (1909).	Russie, Norvège.
7. *A. brevinervis*, Kieffer, ibidem, p. 472 (1909).	France, Allemagne.
8. *A. brevipennis*, Kieffer, ibidem, p. 440 (1908).	France, Italie, Autriche,
var. fuscipes, Kieffer, ibidem, p. 440 (1908).	France. [Hongrie.
9. *A. breviuscula*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 176 (1858).	Laponie.
10. *A. caecutiens*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 437 (1908).	France.
11. *A. californiae*, nom. nov. (*Zygota californica* Ashmead), Bull. U. S. Nat. Mus. Vol. 45, p. 378 (1893).	Californie.
12. *A. californica*, Ashmead, ibidem, p. 373 (1893).	Californie, Alaska.
13. *A. Cameroni*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 455 (1909).	Ecosse.
14. *A. claviscapa*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 175 (1858).	Suède.
15. *A.? columbiana*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 379 (1893).	Washington.
16. *A. conica*, Ashmead, ibidem, p. 377 (1893).	Virginie.
17. *A. crassinervis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 469 (1909).	France.
18. *A. cursor* Kieffer, ibidem, p. 441 (1908).	France.
19. *A. curvinervis*, Kieffer in Strand, Nyt Magaz. f. Naturvid. Kristiania (1910).	Norvège.
20. *A. delicata*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 457 (1909).	Allemagne.
21. *A. dentalipes*, Kieffer ibidem, p. 447 (1908).	Autriche.
22. *A. dolichoneura*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol 33, p. 351 (1909).	Nevada.
23. *A. emarginata*, Kieffer, ibidem, p. 350 (1909).	Wisconsin.
24. *A. excisipes*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 447 (1908).	Autriche.
25. *A. filicornis*, Kieffer (*Tetrapsilus f.*), ibidem, p. 400 (1908).	France.
26. *A. floridana*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 378 (1893).	Floride.
27. *A. fossulata*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 177 (1858).	Suède.
28. *A. fuscata*, Thomson, ibidem, p. 177 (1858).	Suède.
29. *A. hemiptera*, Thomson, ibidem, p. 178 (1858).	Suède.
30. *A. holotoma*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 456 (1909).	Italie.
31. *A. insignis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 350 (1909).	Pensylvanie.
32. *A. lanceolata*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 473 (1909).	Autriche.
var. fuscicornis, Kieffer, ibidem, p 473 (1909).	Autriche.
var. pubescens, Kieffer, ibidem, p. 473 (1909).	Italie.
33. *A. lasiorum*, Kieffer (*Pantolyta l.*), Bull. Soc. Metz (2), Vol. 11, p. 48 (1904).	Autriche.
34. *A. levistilus*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 350 (1909).	Pensylvanie.

35. *A. longinervis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 465 (1909). — Autriche.
36. *A. macroneura*, Kieffer, ibidem, p. 469 (1909). — Ecosse.
37. *A. madagascariensis*, Kieffer in Voeltzkow, Reise in Ostafrika 1903-1905, Wissensch. Ergebnisse, Vol. 2, p. 533 (1910). — Madagascar.
38. *A. maura*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 448 (1908). — Tunisie.
39. *A. microcera*, Kieffer, ibidem, p. 470 (1909). — Ecosse.
40. *A. microneura*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 351 (1909). — Californie.
41. *A. microptera*, Kieffer in Ern. André. Spec. Hym. Eur. Vol. 10, p 438 (1908). — Italie.
42. *A. microtoma*, Kieffer, ibidem, p. 453 (1909). — Ecosse
43. *A. missouriensis*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 377 (1893). — Missouri.
44. *A. myrmecophila*, Kieffer, Bull. Soc. Metz (2), Vol. 11, p. 175 (1904). — Allemagne.
45. *A. nevadensis*, Kieffer, Berl. Ent. Zeitschr. Vol. 50, p. 277 (1906). — Nevada.
46. *A. nigra*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 175 (1858). — Suède.
47. *A. nitida*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 29, p. 141 (1905) — Birmanie.
48. *A. norvegica*, Kieffer in Strand, Nyt Magaz. f. Naturvid. Kristiania (1910). — Norvège.
49. *A. parallela*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 175 (1858). — Suède.
50. *A. pedisequa*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p 441 (1908). — Hongrie.
51. *A. polyrhytis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 351 (1909). — Nicaragua.
52. *A. rufa*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 376 (1893). — Texas.
53. *A. rufescens*, Ashmead, ibidem, p. 376 (1893). — Californie.
54. *A. rufopetiolata*, Ashmead, ibidem, p. 376 (1893). — British Columbie.
55. *A. rugosopetiolata*, Ashmead, ibidem, p. 377 (1893). — Virginie.
56. *A. scleroneura*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 362 (1909). — Pensylvanie.
57. *A. scotica*, Kieffer, in Ern. André, Spec. Hym. Eur. Vol. 10, p. 454 (1909). — Ecosse.
58. *A. semirufa*, Kieffer, ibidem, p. 468 (1909). — Autriche.
59. *A. spinosa*, Kieffer, ibidem, p. 448 (1908). — France.
60. *A. spinosiceps*, Kieffer, ibidem, p. 446 (1908) — Autriche.
61. *A. stigma*, Kieffer, ibidem, p. 467 (1909). — Italie.
62. *A. striata*, Kieffer, ibidem, p. 461 (1909). — France, Italie.
    var. basalis, Kieffer, ibidem, p. 462 (1909). — Allemagne, France.
    var. Solarii, Kieffer, ibidem, p. 462 (1909). — Italie, Angleterre.
63. *A. subaptera*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 177 (1858). — Suède.
64. *A. subclausa*, Kieffer (*Zelotypa s.*), Berl. Ent. Zeitschr. Vol. 51, p. 263 (1907). — Allemagne, Autriche, Suisse, France.
65. *A. sulcata*, Kieffer, in Ern. André, Spec. Hym. Eur. Vol 10, p. 471 (1909). — Autriche.
66. *A. sulciventris*, Kieffer, ibidem, p. 474 (1909). — Croatie.
67. *A. tenuicornis*, Kieffer, ibidem, p. 465 (1909). — France.
68. *A. testacea*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 178 (1858). — Suède.
69. *A. texana*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 374 (1893). — Texas.
70. *A. unicolor*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 438 (1908). — Hongrie.
71. *A. variicornis*, Kieffer, ibidem, p. 464 (1909). — Hongrie.
72. *A. variiventris*, Kieffer, ibidem, p. 463 (1909). — Autriche.

27. Genus PANTOCLIS, Förster

Pantoclis. Förster, Hym. Stud. Vol. 2, p. 129, 136 (1856).

Belyta (part.). Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 171 (1858).

Aneurrhynchus (non Westwood). Provancher, Addit. Faune Canada, Hym. p. 179 (1887).

Zelotypa (part.). Ashmead, Bull. Biol. Colorado Assoc. Vol. 1, p. 12 (1890).

Caractères. — Tête, vue de côté, plus haute que longue; yeux velus, allongés; mandibules inégales, larges, peu longues et terminées en pointe, l'une avec une dent arrondie, située au-dessus du millieu, l'autre avec une petite dent pointue située au-dessous de l'extrémité. Palpes maxillaires de cinq articles, les labiaux de trois. Scape du mâle égalant au maximum les articles 2 et 3 réunis, deuxième article globuleux, le troisième échancré et toujours plus long que le quatrième; 4-14 au maximum trois fois aussi longs que gros. Troisième article de la femelle plus long que le quatrième et ordinairement plus long que le deuxième, 4-14 subégaux et au maximum un peu plus longs que gros, quinzième ovoïdal. Pronotum en ligne transversale, retombant perpendiculairement en avant; thorax plus haut que large; sillons parapsidaux profonds; base du scutellum avec une fossette, disque très convexe. Ailes à nervation complète; *cellule radiale fermée* (chez *soluta*, ouverte en partie à la marge), récurrente droite et dirigée vers la basale. Chez les formes typiques, la marginale n'est pas plus longue ou à peine plus longue que la stigmatique, le pétiole n'est pas plus long ou guère plus long que gros, l'abdomen est déprimé, en ellipse allongée, terminé en pointe chez la femelle et composé de huit tergites, dont le deuxième est très long, 3-6 subégaux, tarière parfois proéminente; chez le mâle, le huitième tergite est un peu incurvé. Chez certaines formes non typiques, la marginale est deux fois aussi longue que la stigmatique, le pétiole deux à deux fois et demie aussi long que gros, l'abdomen parfois fusiforme et les mandibules un peu différentes; cette catégorie ne comprend que des mâles, et il est probable qu'elle se rapporte à un autre genre, peut-être à *Acropiesta* ou *Anectata*, mais la forme des mandibules diffère de celle de ces deux genres (**Pl. 3, Fig. 5**).

Distribution géographique des espèces. — Ce genre comprend quatre-vingt-quatre espèces d'Europe, d'Amérique et d'Asie.

1. *P. aculeata*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 357 (1909).	Pensylvanie.
2. *P. aestivalis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 752 (1909).	Hongrie.
3. *P. alaskensis*, Ashmead (*Zelotypa a.*), Proc. Acad. Nat. Sc. Wash. Vol. 4, p. 139 (1902).	Alaska.
4. *P. analis*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 370 (1893).	Washington.
5. *P. arcuata*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 557 (1909).	France, Hongrie.
var. festiva, Kieffer, ibidem, p. 558 (1909).	France.
6. *P. atra*, Kieffer, ibidem, p. 557 (1909).	France.
7, *P. atristilus*, Kieffer, ibidem, p. 556 (1909).	Suisse.
8. *P. Bakeri*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 354 (1909).	Pensylvanie.
9. *P. barycera*, Förster, Progr. Realsch. Aachen, p. 43 (1861).	Suisse.
10. *P. bidentata*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 573 (1909).	France, Autriche, Italie.
var. radialis, Kieffer, ibidem, p. 573 (1909).	France.
11. *P.? borealis*, Ashmead (*Zelotypa b.*), Proc. Acad. Nat. Sc. Wash. Vol. 4, p. 138 (1902).	Alaska.
12. *P. brevicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 576 (1909).	Allemagne.
13. *P. brevistilus*, Kieffer, ibidem, p. 575 (1909).	France.
var. rufimana, Kieffer, ibidem, p. 575 (1909).	Ile Giglio.
14. *P. Bruesi*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 357 (1909).	Wisconsin, Pensylvanie.
15. *P. californiae*, nom. nov. (*californicus*, Kieffer non Ashmead), ibidem, p. 354 (1909).	Californie.
16. *P. californica*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 371 (1909).	Californie.
17. *P. Cameroni*, Kieffer, Broteria, Vol. 6, p. 38 (1907).	Angleterre.
18. *P. castaneiventris*, Kieffer, ibidem, p. 39 (1907).	Angleterre.
19. *P. cilipes*, Kieffer, ibidem, p. 37 (1907).	Angleterre.
20. *P. clinoneura*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 355 (1909).	Pensylvanie.

21. *P. coloradensis*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 371 (1893). Colorado.
22. *P. crassicornis*, Ashmead, ibidem, p. 369 (1893). Vancouver.
23. *P. crassinervis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 580 (1909). Autriche.
24. *P. dubiosa*, Kieffer Berl. Ent. Zeitschr. Vol. 50, p. 278 (1906). Californie.
25. *P. elongata*, Thomson, Oefv. Svenk. Akad. Förh. Vol. 15, p. 174 (1858). Suède.
26. *P. evanescens*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 579 (1909). Allemagne, Autriche.
27. *P. excavata*, Kieffer, ibidem, p. 561 (1909). Suisse.
28. *P. flavicornis*, Kieffer, ibidem, p. 565 (1909). Hongrie.
29. *P. ? flavidipes*, nom. nov. (*Zelotypa flavipes*, Ashmead), Bull. U. S. Nat. Mus. Vol. 45, p. 365 (1893). Floride.
30. *P. flavipes*, Ashmead, ibidem, p. 371 (1893). Vancouver.
31. *P. flaviventris*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 558 (1909). Hongrie.
32. *P. floridana*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 372 (1893). Floride, Jacksonville.
33. *P. fulvicauda*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 569 (1909). Autriche.
    var. alpina, Kieffer, ibidem, p. 569 (1909). Autriche : Karst.
    var. Carpentieri, Kieffer, ibidem, p. 570 (1909). France.
    var. modesta, Kieffer, ibidem, p. 570 (1909). Autriche : Karst.
34. *P. fuscicornis*, Kieffer, ibidem, p. 578 (1909). France.
35. *P. fuscicoxa*, Kieffer, ibidem, p. 568 (1909). Hongrie.
36. *P. fusciventris*, Kieffer, Broteria, Vol. 6, p. 34 (1907). Angleterre.
37. *P. germanica*, Kieffer in Strand, Nyt Magaz. f. Naturvid. Kristiania (1910). Allemagne.
38. *P. gracilicornis*, Kieffer, Broteria, Vol. 6, p. 36 (1907). Angleterre.
39. *P. Graeffei*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 580 (1909). Autriche.
40. *P. haesitans*, Kieffer, ibidem, p. 552 (1909). France, Hongrie.
41. *P. hirtistilus*, Kieffer, ibidem, p. 565 (1909). Allemagne.
42. *P. inermis*, Provancher, Addit. Faune Canada, Hym. p. 179 (1887). Canada.
43. *P. insignis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 577 (1909). Autriche.
44. *P. insularis*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 369 (1893). Floride, Fort George Isl.
45. *P. integra*, Kieffer in Ern André. Spec. Hym. Eur. Vol. 10, p. 561 (1909), France.
46. *P. integrifrons*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 356 (1909). Pensylvanie.
47. *P. Klagesi*, Kieffer, ibidem, p. 358 (1909). Pensylvanie.
48. *P. lanceolata*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 568 (1909). Italie.
49. *P. levistilus*, Kieffer, ibidem, p. 555 (1909). France.
50. *P. ? longicornis*, Ashmead (*Zelotypa l.*), Bull. U. S. Nat. Mus. Vol. 45, p. 365 (1893). Vancouver.
51. *P. longipennis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 173 (1858). Suède.
52. *P. lusitanica*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 571 (1909). Portugal.
53. *P. macrotoma*, Kieffer, ibidem, p. 581 (1909). France.
54. *P. magnicornis*, Kieffer, ibidem, p. 569 (1909). Allemagne.
55. *P. megaplasta*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 368 (1863). Kansas,
56. *P. microcera*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 576 (1909). Hongrie.
    var. rufosignates, Kieffer, ibidem, p. 576 (1909). Autriche.
57. *P. microneura*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 355 (1909). Pensylvanie.
58. *P. montana*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 368 (1893). Californie, Colorado, Santa Cruz.

59. *P. neglecta*, Kieffer, Broteria, Vol. 6, p. 36 (1907).	Angleterre.
60. *P. nicaraguana*, Brues (*rufipes*, Kieffer non Szépligeti), Bull. Wiscons. Soc. Vol. 4, p. 150 (1906).	Nicaragua.
61. *P. nigristilus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 572 (1909).	Autriche.
62. *P. nigriventris*, Kieffer, Broteria, Vol. 6, p. 41 (1907).	Portugal.
var. acuta, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 582 (1909).	France, Italie, île Giglio.
var. fortidens, Kieffer, ibidem, p. 582 (1909).	Autriche.
var. nervosa, Kieffer, ibidem, p. 583 (1909).	Portugal.
var. obtusa, Kieffer, ibidem, p. 582 (1909).	France, Autriche.
63. *P. obscuripennis*, Kieffer, Broteria, Vol. 6, p. 37 (1907).	Angleterre.
64. *P. opaca*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 173 (1858).	Suède.
65. *P. orthoneura*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 358 (1909).	Wisconsin.
66. *P. pallidipes*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 554 (1909).	Hongrie.
67. *P. picipes*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 368 (1893).	Washington.
68. *P. pubescens*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 574 (1909).	France.
69. *P. pubiventris*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 174 (1858).	Suède.
70. *P. rubrocincta*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 560 (1909).	Autriche, Hongrie.
71. *P. rufescens*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 372 (1893).	Texas.
72. *P. ruficauda*, Ashmead, ibidem, p. 370 (1893).	Vancouver.
73. *P. rufipes*, Szépligeti, Zich. Ergebn. Vol. 2, p. 157 (1901).	Transcaucasie.
74. *P. rufiventris*, Kieffer, Broteria, Vol. 6, p. 39 (1907).	Angleterre.
75. *P.* ? *scutellata*, Ashmead (*Zelotypa s.*), Proc. Acad. Nat. Sc. Wash. Vol. 4, p. 137 (1902).	Alaska.
76. *P. similis*, Kieffer, Broteria, Vol. 6, p. 37 (1907).	Angleterre.
77. *P. singularis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p 354 (1909).	Pensylvanie.
78. *P. soluta*, Kieffer, Broteria, Vol. 6, p. 33 (1907).	Angleterre.
79. *P. subfusca*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 355 (1909).	Pensylvanie.
80. *P. subobtusa*, Kieffer, ibidem, p. 358 (1909).	Pensylvanie.
81. *P. sulcata*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 173 (1858).	Suède.
82. *P. sulcatifrons*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 556 (1909).	France.
83. *P. tenuistilus*, Kieffer, ibidem, p. 577 (1909).	Allemagne.
84. *P. trisulcata*, Kieffer, Broteria, Vol. 6, p. 40 (1907).	Angleterre.

28. Genus ACROPIESTA, Förster

Acropiesta ♀ (non ♂). Förster, Hym. Stud. Vol. 2, p. 129, 135 (1856).
Belyta (part.). Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 170 (1858).
Zelotypa (part.). Kieffer, Berl. Ent. Zeitschr. Vol. 51, p. 264 (1907).

Caractères. — *Femelle.* — Tête transversale vue d'en haut, plus haute que longue étant vue de côté; yeux velus, ovalaires, beaucoup plus courts que les joues; mandibules inégales, l'une tridentée, l'autre bidentée (**Pl. 2, Fig. 2, 3**). Palpes maxillaires de cinq articles, les labiaux de trois. Antennes graduellement épaissies vers le haut; scape inerme, aussi long que les quatre articles suivants réunis; les huit premiers articles du flagellum plus longs que gros, les quatre suivants un peu transversaux, le dernier renflé et aussi long que les deux précédents réunis. Thorax plus haut que large; pronotum en ligne; sillons parapsidaux percurrents; scutellum avec une fossette basale. Nervation complète; cellule

radiale fermée, plus longue que la nervure marginale; récurrente dirigée vers la basale; ailes inférieures avec une cellule fermée. Pétiole court, guère plus long que gros; abdomen terminé en une pointe comprimée, le septième ou dernier tergite un peu plus long que les quatre précédents réunis; six sternites.

Distribution géographique des espèces. — Les seize espèces reviennent à l'Europe et aux Etats-Unis.

1. *A. aptera*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 585 (1909). Allemagne.
2. *A. brachyura*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 172 (1858). Suède.
3. *A. carinata*, Thomson, ibidem, p. 171 (1858). Suède.
4. *A. filicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 590 (1909). Autriche.
5. *A. flavicauda*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 354 (1893). Canada.
6. *A. flavipes*, Kieffer in Ern. André, Spec. Hym. Eur. Vol 10, p. 590 (1909). Ecosse.
7. *A. marginalis*, Kieffer, ibidem. p. 586 (1909). France.
8. *A. nigrocincta*, Kieffer, ibidem, p. 588 (1909). France.
9. *A. radiatula*, Thomson. Oefv. Svensk. Akad. Förh. Vol. 15, p. 170 (1858). Suède.
10. *A. rufiventris*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 588 (1909). Angleterre.
11. *A. sciarivora*, Kieffer (*Zelotypa s.*), Berl. Ent. Zeitschr. Vol. 51, p. 264 (1907). Allemagne.
12. *A. similis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 172 (1858) Suède.
13. *A. striola*, Thomson, ibidem, p. 171 (1858). Suède.
14. *A. subaptera*, Ashmead, Bull. U. S. Nat. Mus. Vol. 10, p. 354 (1893). Michigan.
15. *A. Thomsoni*, nom. nov. (*Belyta brevis*, Thomson non Nees), Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 170 (1868). Suède.
16. *A. xanthura*, Kieffer in Strand, Nyt Magaz. f. Naturvid. Kristiania (1910). Allemagne.

29. Genus MEUSELIA, Kieffer

Meuselia. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 391 (1909).

Caractères. — *Femelle.* — Tête, vue de côté, triangulaire et plus haute que longue; mandibules faiblement proéminentes, mais non en bec; yeux plus courts que les joues, probablement glabres. Antennes de la femelle de quinze articles; scape cylindrique, inerme, aussi long que les quatre articles suivants réunis; troisième article égal au deuxième, deux fois et demie aussi long que gros, 4-6 plus minces, de moitié plus longs que gros; 7-9 subglobuleux et à peine plus gros; 10-15 graduellement grossis, subglobuleux, sauf le quinzième qui est ovoïdal. Cellule radiale fermée, petite, plus courte que la nervure marginale, récurrente droite et dirigée vers la base de la basale; ailes inférieures avec une cellule basale fermée. Pétiole à peine plus long que gros; abdomen un peu comprimé au tiers apical, qui est conique et faiblement incurvé; tergites 3-6 également courts, le septième ou dernier plus long que les quatre précédents réunis, tarière proéminente (**Pl. 2, Fig. 11**, ♀).

Distribution géographique de l'espèce. — Une seule espèce d'Europe.

1. *M. fuscicornis*, Kieffer, Ann. Soc. Scientif. Bruxelles. Vol. 33, p. 392 (1909). Hongrie.

30. Genus ANECTATA, Förster

Anectata. Förster, Hym. Stud. Vol. 2, p. 129, 136 (1856).

Caractères. — Tête, vue de côté, plus haute que longue; yeux velus, au moins aussi longs que les joues; mandibules inégales, celle de droite tridentée, celle de gauche bidentée, la dent terminale deux

fois aussi longue que la dent latérale. Palpes maxillaires de cinq articles, les labiaux de trois. Antennes de la femelle tantôt de quatorze, tantôt de quinze articles, dont le troisième est deux à trois fois aussi long que gros, les suivants graduellement raccourcis, non épaissis, l'avant-dernier pas de moitié plus long que gros, rarement transversal. Antennes du mâle de quatorze articles, dont le troisième est échancré et plus long que le quatrième, les suivants graduellement raccourcis, sauf le dernier. Thorax plus haut que large; sillons parapsidaux percurrents; base du scutellum avec une fossette. Ailes à nervation complète; cellulle radiale fermée, plus longue que la nervure marginale; récurrente droite, sauf parfois à l'extrémité, dirigée tantôt vers la basale, tantôt vers la discoïdale; ailes postérieures avec une cellule fermée. Abdomen de la femelle un peu comprimé, au moins aussi haut que large, fusiforme vu de côté; tergites 3-6 égaux; *son extrémité, qui est formée par les tergites 7 et 8 séparés ou connés, est toujours recourbée faiblement par en haut*, ce qui distingue ce genre de *Pantoclis*; en outre, chez *Pantoclis* et *Aclista*, l'abdomen est plus large que haut, non comprimé et non fusiforme vu de côté; deuxième sternite égal aux tergites 2 et 3 réunis; 3-5 subégaux, sixième et septième formant l'extrémité. Chez le mâle, l'abdomen compte huit tergites et huit sternites et son *extrémité n'est pas incurvée, comme chez* Pantoclis, *mais droite* (**Pl. 3, Fig. 3**, ♀).

Distribution géographique des espèces. — Ce genre comprend vingt-cinq espèces d'Europe et de l'Amérique du Nord.

1. *A. analis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 534 (1909).	France.
2. *A. angusta*, Kieffer, ibidem, p. 528 (1909).	France.
3. *A. atriceps*, Kieffer, ibidem, p. 532 (1909).	Autriche.
4. *A. Bakeri*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 366 (1909).	Nicaragua.
5. *A. bitensis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 531 (1909).	Allemagne.
6. *A. brevistilus*, Kieffer, ibidem, p. 535 (1909).	Ile de Giglio.
7. *A. californica*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 381 (1893)	Californie.
8. *A. coloradensis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 32, p. 42 (1907).	Colorado.
9. *A. crassistilus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 529 (1909).	Hongrie.
10. *A. decipiens*, Kieffer, ibidem, p. 538 (1909).	Allemagne.
var. proxima, Kieffer, ibidem, p. 538 (1909).	France.
11. *A.* ? *dispar*, Brischke, Schrift. Ges. Danzig, N. F. Vol. 7, p. 28 (1891).	Allemagne.
12. *A. Doriai*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 528 (1909).	Ile de Giglio.
13. *A. excisa*, Kieffer, ibidem, p. 539 (1909).	France.
14. *A. fuscicornis*, Kieffer, ibidem, p. 529 (1909).	Hongrie.
15. *A. georgica*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 382 (1893)	Géorgie.
16. *A. hirtifrons*, Ashmead, ibidem, p. 382 (1893).	Canada.
17. *A. hungarica*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 536 (1909).	Hongrie
18. *A. levifrons*, Kieffer, ibidem, p. 530 (1909).	France.
19. *A. longistilus*, Kieffer, ibidem, p. 533 (1909).	Italie.
20. *A. marginalis*, Kieffer, ibidem, p. 534 (1909).	France.
21. *A. modesta*, Kieffer, ibidem, p. 537 (1909).	Allemagne.
22. *A. polita*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 382 (1893).	Colorado.
23. *A. soror*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 532 (1909).	France.
24. *A. striata*, Kieffer, ibidem, p. 536 (1909).	Autriche.
25. *A. striolata*, Kieffer, ibidem, p. 539 (1909).	Hongrie.

31. Genus XENOTOMA, Förster

Belyta (part.). Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 344, nos 8, 9 (1834).
Xenotoma. Förster, Hym. Stud. Vol. 2, p. 129, 137 (1856).
Zelotypa. Förster (non Ashmead), ibidem, p. 130, 141 (1856).
Acoretus. Haliday, Nat. Hist. Review, Vol. 4, p. 166, Proc. (1857).

Caractères. — Yeux velus et ovoïdaux; *mandibules longues, grêles, presque falciformes, croisées* quand elles sont entr'ouvertes, juxtaposées quand elles sont fermées, celle de droite est tridentée et conformée comme l'indique la **Fig. 23, Pl. 2,** celle de gauche est bidentée et semblable à la **Fig. 22, Pl. 2.** Cette même conformation se retrouve aussi chez *Aclista holotoma*, qui est classé dans le genre *Aclista* à cause de sa cellule radiale ouverte, mais qu'on pourrait ranger parmi les *Xenotoma* à cause de la forme de ses mandibules. Palpes maxillaires de cinq articles, les labiaux de trois. Chez la femelle, les derniers articles antennaires ne sont jamais deux fois aussi longs que gros, généralement à peine plus longs que gros. Thorax plus haut que large; sillons parapsidaux percurrents; scutellum avec une fossette à sa base. Nervation alaire complète; *nervure marginale beaucoup plus courte que la cellule radiale*, généralement pas plus longue que la stigmatique; récurrente arquée, parfois droite, mais toujours dirigée vers la discoïdale, rarement nulle. Pétiole deux à quatre fois aussi long que gros; abdomen de la femelle (**Pl. 1, Fig. 8**) plan ou fortement déprimé, troisième tergite beaucoup plus long que le quatrième, ordinairement plus long que les suivants réunis; dans le sous-genre *Acoretus*, le troisième tergite n'est pas plus long ou guère plus long que le quatrième, l'abdomen est moins déprimé et souvent recourbé au bout, comme chez *Anectata;* le nombre des tergites apparents varie de quatre à huit; oviducte non en forme de tarière aciculée, comme chez les genres précédents, mais en forme de stylet obtus et à peine proéminent; ce stylet est formé de deux valves sublinéaires, entourant deux valves internes lesquelles sont appliquées à l'oviducte proprement dit, qui est chitineux et terminé subitement en un cône effilé à l'extrémité (**Pl. 3, Fig. 9,** ♀).

TABLEAU DES SOUS-GENRES

1. *Le troisième tergite de la femelle n'est guère plus long ou pas plus long que le quatrième* . . . . . 1. Subgenus Acoretus, Haliday.
— *Troisième tergite beaucoup plus long que le quatrième* . . . . . 2. Subgenus Xenotoma, Förster.

1. Subgenus ACORETUS, Haliday

Acoretus. Haliday, Nat. Hist. Review, Vol. 4, p. 166, Proc. (1857).
Anectata (Acoretus). Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 526 (1909).
Zelotypa. Förster (non Ashmead), Hym. Stud. Vol. 2, p. 130, 141 (1856).

Caractères. — *Femelle.* — Ne diffère du sous-genre *Xenotoma* que par la forme de l'abdomen, dont le troisième tergite n'est pas plus long ou guère plus long que le quatrième; abdomen moins déprimé, souvent recourbé au bout. Les mâles ne sont probablement pas à distinguer de ceux du sous-genre *Xenotoma*.

Distribution géographique des espèces. — Les dix-sept espèces proviennent d'Europe, d'Amérique et d'Afrique.

1. *X.* (*A.*) *africana*, Kieffer, (*Zelotypa A.*), in Herzog zu Mecklenburg Wiss. Albert-Edw.-See. Bände, Vol. 4, p. 4 (1910).

2. *X.* (*A.*) *alticollis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 157 (1858). — Suède.
   var. acuta, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 546 (1909). — Allemagne.
   var. aestivalis, Kieffer, ibidem, p. 547 (1909). — Autriche.
   var. isotoma, Kieffer, ibidem, p. 547 (1909). — Hongrie.
3. *X.* (*A.*) *Ashmeadi*, Kieffer (*Zelotypa A.*), Bull. Soc. Metz (2), Vol. 12, p. 109 (1905). — Californie.
4. *X.* (*A.*) *boops*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 157 (1858). — Suède.
5. *X.* (*A.*) *dubia*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 543 (1909). — France.
6. *X.* (*A.*) *eucera*, Kieffer, ibidem, p. 545 (1909). — Autriche.
7. *X.* (*A.*) *fallax*, Kieffer, ibidem, p 544 (1909). — France, Hongrie.
   var. arcuata, Kieffer, ibidem, p. 544 (1909). — Autriche.
8. *X.* (*A.*) *filicornis*, Kieffer (*Zelotypa f.*), Berl. Ent. Zeitschr. Vol. 50, p. 279 (1905). — Etats-Unis.
9. *X.* (*A.*) *filiformis*, nom. nov. (*filicornis* non *Zelotypa filicornis*), Broteria, Vol. 6, p. 40 (1907). — Ecosse.
10. *X.* (*A.*) *flavicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 541 (1909). — France.
11. *X.* (*A.*) *flavicoxis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 158 (1858). — Suède.
12. *X.* (*A.*) *fractinervis*, Kieffer (*Zelotypa f.*) in Ern. André, Spec. Hym. Eur. Vol. 10, p. 600 (1910). — Ile de Giglio.
13. *X.* (*A.*) *fuscicornis*, Kieffer (*Zelotypa f.*), ibidem, p. 600 (1910). — Autriche.
14. *X.* (*A.*) *hamifera*, Kieffer (*Zelotypa h.*), ibidem, p. 599 (1910). — Allemagne, Autriche, Hongrie, Sicile.
15. *X.* (*A.*) *microtoma*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 542 (1909). — Allemagne, France.
16. *X.* (*A.*) *striolata*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 157 (1858). — Suède.
17. *X.* (*A.*) *xanthosema*, nom. nov. (*xanthopa*, non Ashmead), Cameron, Trans. Amer. Ent. Soc. Vol. 30, p. 262 (1904). — Mexique.

2. Subgenus XENOTOMA, Förster

Caractères. — Troisième tergite de la femelle beaucoup plus long que le quatrième et ordinairement plus long que tous les suivants réunis.

Distribution géographique des espèces. — Les soixante-trois espèces ont été observées en Europe et en Amérique.

18. *X. arcitenens*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 629 (1910). — France.
19. *X. atra*, Kieffer, ibidem, p. 625 (1910). — France.
20. *X. Bakeri*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 373 (1909). — Wisconsin, Pensylvanie.
21. *X. brachycera*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 607 (1910). — France, Italie.
22. *X. castanea*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 32, p. 44 (1907). — Pensylvanie.
23. *X. castaneiventris*, Kieffer, Broteria, Vol. 6, p. 39 (1907). — Angleterre.
24. *X. cilipes*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 631 (1910). — Ecosse.
25. *X. Clarimontis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 374 (1909). — Californie.
26. *X. clinoneura*, Kieffer, ibidem, p. 372 (1909). — Wisconsin.
27. *X. coloradensis*, Kieffer, ibidem, p. 370 (1909). — Colorado.
28. *X. crassinervis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 662 (1910). — Hongrie.

29. *X. dolichocera*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 608 (1910).	France.
30. *X. dubiosa*, Kieffer, ibidem, p. 610 (1910).	Autriche. Portugal.
31. *X. elevata*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 158 (1858).	Suède.
32. *X. evanescens*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 624 (1910).	Italie.
33. *X. festiva*, Kieffer, ibidem, p. 606 (1910).	France.
34. *X. flavinervis*, Kieffer. Ann Soc. Scientif. Bruxelles, Vol. 33, p. 375 (1909).	Pensylvanie.
35. *X. flavipes*, nom. nov. (*xanthopus*, Kieffer non Ashmead), ibidem, p. 371 (1909).	Pensylvanie.
36. *X. Försteri*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 633 (1910).	Autriche.
var. abbreviata, Kieffer, ibidem, p. 633 (1910).	Autriche.
37. *X. fracta*, Kieffer, ibidem, p. 629 (1910).	Autriche.
38. *X. fusca*, nom. nov. (*fuscicornis*, non *Zelotypa fuscicornis*), Kieffer in Ern. André, Spec. Hym. Eur. Vol 10, p. 613 (1910).	Allemagne.
var. atricoxis, Kieffer, ibidem, p. 613 (1910).	France.
39. *X. fuscinervis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 375 (1909).	Pensylvanie.
40. *X. fusciventris*, Kieffer, Broteria, Vol. 6, p. 34 (1907).	Angleterre.
41. *X. Goettei*, Kieffer, Mitt. Philom. Ver. Strassburg, Vol. 3, p. 416 (1907).	Allemagne.
42. *X. gracilicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 614 (1910).	Ecosse.
43. *X. gracilis*, Kieffer, Broteria, Vol. 6, p. 26 (1907).	Allemagne.
var. brevicornis, Kieffer, ibidem, p. 27 (1907).	Allemagne.
var. leptogaster, Kieffer, ibidem, p. 26 (1907).	Allemagne.
var. procera, Kieffer, ibidem, p. 26 (1907).	Allemagne.
var. proxima, Kieffer, ibidem, p. 27 (1907).	Allemagne.
44. *X. haemorrhoidalis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 611 (1910).	France.
45. *X. hamata*, Kieffer, ibidem, p. 605 (1910).	France, Allemagne.
46. *X. hungarica*, Kieffer, ibidem, p. 612 (1910).	Hongrie.
47. *X. inflexa*, Kieffer, ibidem, p. 633 (1910).	France.
48. *X. Klagesi*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 374 (1909).	Pensylvanie.
49. *X. laeta*, Kieffer, ibidem, p. 371 (1909).	Californie.
50. *X. lugens*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 630 (1910).	Allemagne.
51. *X. mandibularis*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 363 (1893).	Texas.
52. *X. Manteroi*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 606 (1910).	Italie.
53. *X. Marshalli*, Kieffer (*pallida*, Kieffer non Thomson), Broteria, Vol. 6, p. 28 (1907).	Angleterre.
54. *X. maura*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 636 (1910).	France, Portugal, Autriche.
55. *X. melanocera*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 370 (1909).	Californie.
56. *X. monticola*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 635 (1910).	Italie.
57. *X. nigra*, Kieffer, Broteria, Vol. 6, p. 25 (1907).	Angleterre.
58. *X. nigrescens*, Kieffer, ibidem, p. 25 (1907).	Angleterre.
59. *X. nigriceps*, Kieffer, ibidem, p. 28 (1907).	Angleterre.
60. *X. nigricoxis*, Förster, Progr. Realsch. Aachen, p. 44 (1861).	Suisse.

61. *X. pallida*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 156 (1858). Suède, Angleterre.
62. *X. parvicellula*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 371 (1909). Californie.
63. *X. parvula*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 624 (1910). Allemagne.
64. *X. pleuralis*, Kieffer, Broteria, Vol. 6, p. 24 (1907). Angleterre.
65. *X. recta*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 608 (1910). Portugal.
66. *X. rufifrons*, Kieffer, ibidem, p. 623 (1910). Autriche.
67. *X. rufipes*, Kieffer, Broteria, Vol. 6, p. 29 (1907). Allemagne.
68. *X. rufopetiolata*, Nees, Hym. Ichneum. Affin. Monogr. Vol. 2, p. 342 (1834). Allemagne, Angleterre.
69. *X. rufosignata*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 373 (1909). Californie.
70. *X. scotica*, Kieffer (*Pantoclis proxima*, Kieffer, non *X. gracilis*, var. *proxima*, Kieffer), Broteria, Vol. 6, p. 35 (1907). Angleterre.
71. *X. scutellaris*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 159 (1858). Suède.
72. *X. seticornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 609 (1910). Italie.
73. *X. similis*, Kieffer, Broteria. Vol. 6, p. 37 (1907). Angleterre.
74. *X. subaequalis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 623 (1910). France.
75. *X. Szépligetii*, Kieffer, ibidem, p. 635 (1910). Hongrie.
76. *X. tenuinervis*, Kieffer, ibidem, p. 614 (1910). France.
77. *X. trisulcata*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 372 (1909). Pensylvanie.
78. *X. versicolor*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 621 (1910). France.
    var. nigriventris, Kieffer, ibidem, p. 622 (1910). France, Allemagne.
    var. rufistilus, Kieffer, ibidem, p. 621 (1910). France.
79. *X. vitellinipes*, Kieffer, ibidem, p. 627 (1910). Hongrie.
80. *X. xanthopa*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 363 (1893). New Jersey.

32. Genus PROZELOTYPA, Kieffer

Prozelotypa. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 367 (1909).

Caractères. — *Femelle.* — Tête très transversale vue d'en haut; yeux velus, de moitié plus longs que les joues; *mandibules longues et croisées*, comme chez *Xenotoma*. Antennes filiformes, de quinze articles; les articles du flagellum graduellement raccourcis, tous plus longs que gros. Thorax plus haut que large; arête du segment médian simple. Cellule radiale fermée, beaucoup plus longue que la nervure marginale; stigmatique un peu plus courte que la marginale; récurrente très courte, dirigée vers la basale; ailes inférieures avec une cellule fermée. *Pétiole plus long que l'abdomen; deuxième tergite occupant les quatre cinquièmes;* troisième ou dernier en cône déprimé.

Mâle inconnu.

Distribution géographique de l'espèce. — Ce genre est établi sur un insecte de l'Amérique du Sud.

1. *P. longicornis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 367 (1909). Paraguay.

33. Genus MACROHYNNIS, Förster

Macrohynnis. Förster, Hym. Stud. Vol. 2, p. 129, 136 (1856).

Caractères. — Tête transversale vue d'en haut, triangulaire et plus haute que longue vue de côté; yeux faiblement velus, allongés; mandibules croisées, falciformes, avec une ou deux dents au milieu. Palpes maxillaires de cinq articles, les labiaux de trois. Antennes de la femelle très minces et plus longues que le corps; scape cylindrique, pas plus long que le troisième article; les articles 3-14 cylindriques et graduellement raccourcis, le quatrième quatre fois aussi long que gros, plus court que le troisième, le quatorzième au moins deux fois aussi long que gros, un peu plus court que le quinzième; chez le mâle, le troisième article est échancré et plus long que le scape, les suivants graduellement raccourcis, le quatorzième encore deux fois aussi long que gros. Pronotum rétréci en ligne et situé bien plus bas que le mesonotum; sillons parapsidaux profonds; base du scutellum avec une fosette. Nervation alaire complète; *cellule radiale fermée, très petite, égalant le tiers ou la moitié de la nervure marginale;* récurrente droite, dirigée vers l'origine de la basale; ailes postérieures avec une cellule basale fermée. Pétiole deux et demi à trois fois aussi long que gros; abdomen de la femelle comprimé, au moins en arrière, grand tergite occupant les quatre cinquièmes antérieurs, strié à sa base; tergites 3 et 4 très courts, à peine distincts; cinquième plus long que les deux précédents réunis; segment anal du mâle incurvé.

Distribution géographique des espèces. — Ce genre comprend trois espèces, dont deux d'Europe et une des Etats-Unis.

1. *M. americanus,* Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 338 (1909). Pensylvanie.
2. *M. lepidus*, Mayr, Verh. Zool.-bot. Ges. Wien, Vol. 54, p. 593 (1904). Allemagne.
3. *M. rufiventer,* Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 417 (1908). Autriche.

34. Genus PROCINETUS, Kieffer

Cinetus (part.). Kieffer, Ann. Mus. Stor. Nat. Genova, Vol. 42, p. 23 (1905).
Procinetus. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 638 (1910).

Caractères. — *Mâle.* — Tête transversale vue d'en haut, triangulaire vue de côté; yeux densément velus, plus longs que les joues. Scape aussi long que le troisième article, faiblement grossi au milieu; troisième article plus de quatre fois aussi long que le gros, les suivants graduellement amincis et raccourcis, le treizième encore trois fois et demie aussi long que gros, plus court que le quatorzième; *pilosité dressée, deux à trois fois aussi longue que les articles.* Pronotum à peine visible d'en haut; sillons parapsidaux profonds; base du scutellum avec une fossette; segment médian avec trois arêtes simples. Nervation alaire complète; cellule radiale fermée, deux fois aussi longue que la nervure marginale; récurrente arquée. Pétiole presque trois fois aussi long que gros; deuxième tergite occupant les trois quarts antérieurs, avec trois sillons à sa base; les cinq tergites suivants d'égale longueur.

Distribution géographique de l'espèce. — L'unique espèce revient à l'Océanie.

1. *P. radiatus*, Kieffer, Ann. Mus. Stor. Nat. Genova, Vol. 42, p. 23 (1905). Nouvelle-Guinée britannique.

35. Genus CINETUS, Jurine

Cinetus. Jurine (non Ashmead), Nouv. Méth. Class. Hym. p. 310 (1807).
Miota. Ashmead (non Förster), Bull. U. S. Nat. Mus. Vol. 45, p. 352 (1893).
Psilomma. Ashmead (non Ashmead 1893), The Canad. Entom. Vol. 19, p. 197 (1887).

Caractères. — Mandibules petites, subtriangulaires, peu inégales, légèrement bidentées ou sans dent bien distincte (**Pl. 2, Fig. 18, 19**); yeux velus. Palpes maxillaires de cinq articles, les labiaux de trois. Antennes grêles et filiformes; *scape plus long que le troisième article* dans les deux sexes; le troisième plus long que le quatrième; tous les articles du flagellum longuement cylindriques. Thorax comme chez *Xenotoma*. *Cellule radiale fermée, pas plus longue que la nervure marginale*, nervure récurrente arquée et dirigée vers la discoïdale. Pétiole une fois et demie à cinq fois aussi long que gros; *abdomen de la femelle déprimé*, troisième tergite plus long que les suivants réunis quand ceux-ci sont en partie rentrés les uns dans les autres, moins long dans le cas contraire; *oviducte en forme de stylet*, dépassant plus ou moins distinctement l'extrémité de l'abdomen.

Type du genre : *C. iridipennis*, Lepelletier. Quant à *Cinetus bicornis*, Curtis, et *rubecula*, Curtis, ce sont des nomina nuda sans description.

Les *Cinetus* d'Ashmead ont la cellule radiale deux à trois fois aussi longue que la nervure marginale et sont par suite à exclure de ce genre; ce sont probablement des *Miota*, tandis que les *Miota* Ashmead sont des *Cinetus* ou des *Leptorhaptus* (**Pl. 3, Fig. 10,** ♀).

Distribution géographique des espèces. — Ce genre compte ses représentants en Europe, en Asie et en Amérique.

1. *C. alpestris*, Kieffer in Ern. André, Spec. Hym. Eur,. Vol. 10, p. 648 (1910). Italie.
2. *C. americanus*, Ashmead (*Miota a.*), The Canad. Entom. Vol. 19, p. 197 (1887). Floride.
3. *C. analis*, Ashmead (*Miota a.*), Bull. U. S. Nat. Mus. Vol. 45, p. 352 (1893). Carolina.
4. *C. angustatus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol 10, p. 642 (1910). Italie, Autriche, Hongrie.
5. *C. brevipetiolatus*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 160 (1858). Suède.
6. *C. Cameroni*, Kieffer in Ern André, Spec. Hym. Eur. Vol. 10, p. 644 (1910). Ecosse.
7. *C.* ? *Cantianus*, Curtis, Brit. Ent. Vol. 8, p. 380 (1831). Angleterre.
8. *C. Carpentieri*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 640 (1910). France.
9. *C coloradensis*, Ashmead (*Psilomma c.*), Bull. Biol. Colorado Assoc. Vol. 1. p. 11 (1890). Colorado.
10. *C.* ? *cursor*, Curtis, Brit. Ent. Vol. 8, p. 380 (1831). Angleterre.
11. *C. decipiens*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 641 (1910). France.
12. *C. dentatus*, Kieffer, ibidem, p. 651 (1910). France, Autriche.
13. *C. excavatus*, Kieffer, ibidem, p. 650 (1910). France.
14. *C. filicornis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 159 (1858). Suède.
15. *C.* ? *fuliginosus*, Curtis, Brit. Ent. Vol. 8, p. 380 (1831). Angleterre.
16. *C. fuscicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 649 (1910). France
17. *C. fuscinervis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 163 (1858). Suède.
18. *C. fuscipes*, Kieffer (*Pantoclis f.*), Broteria, Vol. 6, p. 34 (1907). Angleterre.
19. *C. glaber*, Ashmead (*Miota g.*), Bull. Colorado Biol. Assoc. Vol. 1, p. 12 (1890). Colorado.
20. *C.* ? *gracilipes*, Curtis, Brit. Ent. Vol. 8, p. 380 (1831). Angleterre.
21. *C.* ? *gracilis*, Curtis, ibidem, p. 380 (1831). Angleterre.
22. *C.* ? *hakonensis*, Ashmead (*Miota h.*), Journ. New York Ent. Soc. Vol. 12, p. 68 (1904). Japon.

23. *C. hungaricus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 644 (1910). Hongrie.
24. *C. iridipennis*, Lepeletier (*cilipes* Kieffer, *femoralis* Nees), Encycl. Méth. Vol. 10, p. 211 (1825). France, Allemagne, Autriche.
    var. atriceps, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 646 (1910). Hongrie.
    var. prolongatus, Kieffer, ibidem, p. 646 (1910). Ecosse.
25. *C. lanceolatus*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 161 (1858). Suède.
26. *C. montícola*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 376 (1909). Californie.
27. *C.* ? *nasutus*, Provancher, Addit. et Correct. p. 178 (1887). Canada.
28. *C. obscurus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 647 (1910). France.
29. *C. pennsylvanicus*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 376 (1909). Pensylvanie.
30. *C. piciventris*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 163 (1858). Suède.
31. *C. piceus*, Thomson, ibidem, p. 161 (1858). Suède.
32. *C.* ? *ruficornis*, Curtis, Brit. Ent. Vol. 8, p. 380 (1831). Angleterre.
33. *C. rufipes*, Sichel, Bull. Soc. Ent. Fr. (3), Vol. 7, p. 213 (1859). France.
34. *C. Strandi*, Kieffer in Strand, Nyt Magaz. f. Naturvid. Kristiania (1910). Allemagne.
35. *C. tenuicornis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 160 (1858). Suède.
36. *C. xanthocerus*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 377 (1909). Pensylvanie.

36. Genus LEPTORHAPTUS, Förster

Leptorhaptus. Förster, Hym. Stud. Vol. 2, p. 129, 137 (1856).
Pantoclis (part.). Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 553 (1909).

Caractères. — Tête et thorax comme chez *Xenotoma*, sauf que les mandibules (**Pl. 2, Fig. 24, 25**) sont courtes, inégales, triangulaires, l'une avec une petite dent près de l'extrémité, l'autre avec une dent transversale au-dessus du milieu. Antennes grêles, très longues, *le scape n'est pas plus long que le troisième article*, qui est plus long que le quatrième; articles du flagellum longuement cylindriques, graduellement raccourcis vers le haut, dans les deux sexes, sauf l'article terminal. Ailes à nervation complète; *cellule radiale fermée, à peu près de même longueur que la nervure marginale;* récurrente tantôt arquée, tantôt droite. Pétiole médiocrement long, ordinairement lisse sur le dessus; *abdomen de la femelle comprimé au moins en arrière*, composé de trois tergites, dont le deuxième est très long. *Abdomen du mâle piriforme*, le deuxième tergite atteint presque l'extrémité, les *six tergites suivants n'étant pas distinctement séparés;* six sternites. Quatre espèces, douteusement à rapporter ici, ont l'abdomen composé de quatre ou cinq tergites distincts chez la femelle; nous les indiquons par un astérisque. Ce genre est voisin de *Cinetus*, dont il diffère par le scape plus gros et moins long et par la forme de l'abdomen (**Pl. 3, Fig. 11**, ♀).

Distribution géographique des espèces. — Les quarante-cinq espèces dont se compose ce genre ont été observées en Europe et en Amérique.

1. *L. abbreviatus*, Kieffer, Broteria, Vol. 6, p. 19 (1907). Allemagne.
2. *L. analis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 656 (1910). France.
3. *L. Ashmeadi*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 377 (1909). Californie.
4. *L. atriceps*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 669 (1910). Italie.

5. *L. Bakeri*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 378 (1909).	Californie.
6. *L. bisulcatus*, Kieffer, ibidem, p. 378 (1909).	Pensylvanie.
7. *L. brevicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 379 (1910).	Hongrie.
8. *L. Clarimontis*, Kieffer, Ann. Soc. Scientif. Bruxelles. Vol. 33, p. 657 (1909).	Californie.
9. *L. compressus*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p 162 (1858).	Suède.
10. *L.*, ? *conicus*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 350 (1893).	Washington et Fla.
11. *L. costalis*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 161 (1858).	Laponie.
12. *L. crassinervis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 675 (1910).	France
13. *L. dolichocerus*, Kieffer, ibidem, p. 663 (1910).	Allemagne.
14. *L. egregius*, Kieffer, ibidem, p. 673 (1910).	Ecosse, Hongrie.
15. *L. excavatus*, Kieffer, ibidem, p. 661 (1910).	Autriche.
16. *L. excisus*, Kieffer, ibidem, p. 676 (1910).	France.
var. conjungens, Kieffer, ibidem, p. 676 (1910).	Ecosse.
17. *L. flavicornis*, Kieffer (*Miota f.*), Berl. Ent. Zeitschr. Vol. 50, p. 281 (1906).	Etats-Unis.
18. *L. flavidicornis*, nom. nov. (*flavicornis* non *Miota f.*), Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 671 (1910).	Hongrie.
19. *L. fungorum*, Kieffer (*compressus*, Kieffer non Thomson), Broteria, Vol. 6, p. 17 (1907).	Angleterre, France, Autriche, Italie.
20. *L. heterocerus*, Kieffer, ibidem, p. 19 (1907).	Ecosse.
21. *L. histrio*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 659 (1910).	Autriche.
22. *L. holotomus*, Kieffer, ibidem, p. 672 (1910).	France.
var. gracilicornis, Kieffer, ibidem, p. 672 (1910).	Hongrie.
var. variicornis, Kieffer, ibidem, p. 672 (1910).	Autriche.
23. *L. incisus*, Kieffer, ibidem, p. 661 (1910).	Allemagne.
24. *L. longicornis*, Kieffer (*Pantoclis l.*), ibidem, p. 553 (1909).	France.
25. *L. longinervis*, Kieffer, Berl. Ent. Zeitschr. Vol. 50, p. 281 (1906).	Californie.
26. *L. macrocerus*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 665 (1910).	Italie.
27. *L. marginalis*, Kieffer (*Pantoclis m.*), ibidem, p. 554 (1909).	France.
28. *L. microgaster*, Kieffer, ibidem, p. 680 (1910).	France.
29. *L. monilicornis*, Kieffer, ibidem, p. 657 (1910).	Allemagne.
var. crassipes, Kieffer, ibidem, p. 658 (1910).	Italie.
var. fulviventris, Kieffer, ibidem, p. 658 (1910).	Allemagne.
30. *L. niger*, Kieffer, ibidem, p. 671 (1910).	Hongrie.
31. *L. nitidus*, Kieffer, ibidem, p. 662 (1910).	Autriche.
32. *L. perplexus*, Kieffer, ibidem, p. 679 (1910).	Allemagne.
33. *L. petiolaris*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 162 (1858).	Suède.
34. *L. politus*, Thomson, ibidem, p. 163 (1858).	Suède.
35. *L. prolongatus*, Kieffer in Ern André, Spec. Hym. Eur. Vol. 10. p. 674 (1910).	Autriche, Norvège.
36. *L. rufescens*, nom. nov. (*rufus*, Kieffer non Ashmead), ibidem, p. 658 (1910).	France.
37. *L. ruficornis*, Ashmead (*Zelotypa r.*), Bull. U. S. Nat. Mus. Vol. 45, p. 366 (1893).	Vancouver.
38. *L. rufiventris*, Kieffer, Broteria, Vol. 6, p. 18 (1907).	Ecosse.
39. *L. rufus*, Ashmead, Bull U. S. Nat. Mus. Vol. 45, p. 350 (1893).	Vancouver.
40. *L. rugosus*, Kieffer in Ern. André, Spec Hym. Eur. Vol. 10, p. 660 (1910).	Hongrie.
41. *L. scutellaris*, Kieffer, ibidem, p. 669 (1910).	Autriche.
42. *L. semirufus*, Kieffer, ibidem, p. 670 (1910).	France, Italie.
43. *L. striatistilus*, Kieffer, ibidem, p. 676 (1910).	France.

44. *L. tenuicornis*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 674 (1910). France.
45. *L. texanus*, Ashmead (*Zelotypa t.*), Bull. U. S. Nat. Mus. Vol. 45, p. 365 (1893). Texas.

37. Genus SCORPIOTELEIA, Ashmead

Scorpioteleia. Ashmead, The Canad. Entom. Vol. 29, p. 53 (1897).
Miota (part.). Kieffer, Broteria, Vol. 6, p. 21 (1907).

Caractères. — *Femelle.* — Tête et thorax comme chez *Xenotoma;* mandibules, chez *lusitanica*, peu inégales, subtriangulaires, avec une petite dent au-dessus du milieu; palpes maxillaires de cinq articles, les labiaux de trois. Antennes longues, filiformes, de quinze articles. Ailes à nervation complète; *nervure marginale au moins aussi longue que la cellule radiale*, qui est fermée; récurrente arquée; ailes inférieures avec une cellule basale fermée. Abdomen composé de cinq ou six, rarement de deux à quatre tergites; pétiole deux à deux et demie fois aussi long que gros, non bosselé au milieu; *les deux à quatre derniers tergites*, ou la partie postérieure du deuxième s'il n'y en a qu'un après le pétiole, *sont amincis en tube*, longs, grêles et ressemblant plus ou moins aux segments terminaux d'un scorpion; oviducte en forme de stylet faiblement proéminent. Ce genre est voisin de *Cinetus* et de *Miota*, probablement identique à *Cinetus*.

Type du genre : *S. mirabilis*, Ashmead.

Distribution géographique des espèces. — Le genre *Scorpioteleia* compte ses représentants aux Etats-Unis et en Europe.

1. *S. ditoma*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 685 (1910). Autriche.
2. *S. gracilicornis*, Kieffer, ibidem, p. 682 (1910). Italie.
3. *S. lusitanica*, Kieffer, Broteria, Vol. 6, p. 21 (1907). Portugal.
4. *S. mirabilis*, Ashmead, The Canad. Entom. Vol. 29, p. 53 (1897). Canada.
5. *S. rufa*, Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 684 (1910). France.

38. Genus STYLIDODON, Ashmead

Stylidodon. Ashmead, The Canad. Entom. Vol. 29, p. 53 (1897).

Caractères. — « Antennes filiformes, dernier article ovoïdal; abdomen de six segments; deuxième segment à peine plus long que le pétiole, découpé triangulairement en arrière; le troisième un peu plus long que les deux suivants réunis; le dernier segment conique (Ashmead) ». Ce genre demeure énigmatique; cette courte diagnose donnée par Ashmead convient tout aussi bien à *Cinetus*.

Distribution géographique de l'espèce. — L'unique représentant revient à l'Amérique du Nord.

1. *S. politum*, Ashmead, The Canad. Entom. Vol. 29, p. 53 (1897). Canada.

39. Genus MIOTA, Förster, non Ashmead

Miota. Förster, Hym. Stud. Vol. 2, p. 131, 141 (1856).
? **Cinetus** (non Jurine nec Förster). Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 359 (1893).
? **Cinetus** (part.). Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 164 (1858).
? **Belyta**. Say Lec., Ed. Say's Works, Vol. 2, p. 726 (1836).

Caractères. — Antennes filiformes et très allongées, tous les articles du flagellum cylindriques; chez le mâle, le troisième article est échancré. Tête et thorax comme chez *Xenotoma*, sauf que les mandibules sont plus petites, mais conformées de la même façon (**Pl. 2, Fig 4, 5**). *Cellule radiale fermée, au moins deux fois aussi longue* que la nervure marginale; récurrente dirigée vers la discoïdale et ordinairement arquée. Pétiole du mâle au moins trois fois aussi long que gros, celui de la femelle deux fois; abdomen de la femelle comprimé et composé de trois tergites et de trois sternites; étant vu de côté, il ressemble à un soc de charrue; le deuxième tergite très grand, aminci presque en tube postérieurement; le troisième en forme de stylet court et dirigé par en haut. Parfois on voit encore un quatrième et un cinquième tergite. Selon Förster, « la forme singulière du deuxième segment abdominal ne permet pas de réunir ce genre à *Leptorhaptus*, avec lequel il a beaucoup de ressemblance ». Le deuxième tergite n'est pas toujours comprimé, chez *luteipes* il est déprimé.

Type du genre : *M. compressa*, Kieffer.

Chez *brevinervis*, qui forme peut-être un genre nouveau, l'abdomen est de cinq tergites, non en tube mais comprimé et conique en arrière (**Pl. 3, Fig. 12**).

Distribution géographique des espèces. — Les onze espèces qui suivent reviennent à l'Europe et à l'Amérique.

1. *M.* ? *brevinervis*, Kieffer, Berl. Ent. Zeitschr. Vol. 50, p. 282 (1906).	Nicaragua.
2. *M.* ? *californica*, Ashmead, Bull. U. S. Nat. Mus. Vol. 54, p. 361 (1893).	Californie.
3. *M. compressa*, Kieffer in Ern. André. Spec. Hym. Eur. Vol. 10, p. 690 (1910).	France.
4. *M. longepetiolata*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 164, (1858).	Suède.
5. *M. longiventris*. Kieffer in Ern. André, Spec. Hym. Eur. Vol. 10, p. 691 (1910).	Autriche.
6. *M. luteipes*, Kieffer, ibidem, p. 689 (1910).	Hongrie.
7. *M. macrocera*, Thomson, Oefv. Svensk. Akad. Förh. Vol. 15, p. 164 (1858).	Suède.
8. *M.* ? *macrodyctium*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 378 (1893).	Colorado, Vancouver.
9. *M.* ? *mellipes*, Say Lec., Ed. Say's Works, Vol 2, p. 726 (1836).	Vancouver.
10. *M. ruficornis*, Ashmead, Bull. U. S. Nat. Mus. Vol. 45, p. 360 (1893).	Vancouver.
11. *M. similis*, Ashmead, ibidem, p. 361 (1893).	Vancouver.

40. Genus MIOTELLA, Kieffer

Miotella. Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 379 (1909).

Caractères. — *Femelle.* — Tête circulaire vue de devant, plus de deux fois aussi large que longue vue d'en haut, beaucoup plus haute que longue vue de côté, yeux deux fois aussi longs que les joues, à poils très courts et à peine perceptibles, mandibules petites. Antennes de quinze articles, scape aussi long que les articles 2 et 3 réunis; articles du flagellum plus minces, graduellement raccourcis, le dernier un peu grossi, très long, aussi long que les trois précédents réunis, ceux-ci un peu plus longs que gros; poils dressés, plus courts que l'épaisseur des articles. Thorax plus haut que large, sillons parapsidaux convergents en arrière, scutellum très convexe, avec une fossette transversale à sa base. Segment médian à arête simple. Cellule radiale fermée, plus de deux fois aussi longue que la nervure marginale. Pétiole presque lisse, deux fois et demie aussi long que gros, abdomen n'ayant qu'un seul tergite après le pétiole, fusiforme, sans impression, faiblement déprimé, plus convexe dessous que dessus.

Distribution géographique de l'espèce. — L'unique espèce provient d'Amérique.

1. *M. tenuicornis*, Kieffer, Ann. Soc. Scientif. Bruxelles, Vol. 33, p. 379 (1909). Bolivie.

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EXPLICATION DES PLANCHES

Planche 1

Fig. 1. *Pantolyta semirufa*, Kieffer, ♂ (cam. lucida).
— 2. Tête et premiers articles antennaires de *Rhynchopsilus apterus*, Kieffer.
— 3. Tête et premiers articles antennaires de *Aclista* (*Tetrapsilus*) *filicornis*, Kieffer.
— 4. Aile antérieure d'un Belytide : *ac*, nervure costale; *cd*, nervure marginale; *di*, nervure post-marginale; *ahc*, nervure sous-costale; *ho*, nervure basale; *gh*, nervure radiale; *dk*, nervure stigmatique; *kf*, nervure récurrente; *aon*, nervure médiane; *m*, nervure discoïdale; *p*, cellule sous-costale; *b*, cellule médiane; *e*, cellule radiale.
— 5. Extrémité du tibia antérieur et tarse d'un *Aclista* (*Zygota*), ♂.
— 6. Patte antérieure de *Xenotoma rufipes*, Kieffer (cam. luc.).
— 7. Aile antérieure de *Psilomma*.
— 8. Abdomen de *Xenotoma rufipes*, Kieffer, ♀.
— 9. Antenne du même insecte (cam. luc.).
— 10. *Pantolyta pallida*, Kieffer, ♀ (cam. luc.).
— 11. Profil d'un *Oxylabis*.
— 12. Thorax et pétiole de *Aclista* (*Tetrapsilus*) *filicornis*, Kieffer.
— 13. Mandibule de *Scorpioteleia lusitanica*, Kieffer.
— 14. Segment médian de *Belyta*.
— 15. Une des mandibules de *Leptorhaptus monilicornis*, Kieffer (l'autre est semblable à la figure 2 de la planche 2).
— 16. Mandibules de *Aclista* (*Tetrapsilus*) *subclausa*, Kieffer.
— 17. Mandibules de *Belyta arietina*, Kieffer.
— 18. *Betyla fulva*, Cameron, ♀; 18*a*, antenne.
— 19. *Betyla fulva*, Cameron, ♂; 19*a*, antenne.

Planche 2

Fig. 1. *Diphora monticola*, Kieffer, ♀.
— 2 et 3. Mandibules de *Acropiesta sciarivora*, Kieffer.
— 4 et 5. Mandibules de *Miota luteipes*, Kieffer.
— 6 et 7. Mandibules de
— 8 et 9. Mandibules de *Psilomma tenuicornis*, Kieffer.
— 10. *Anommatium Ashmeadi*, Mayr, ♀.
— 11. *Meuselia fuscicornis*, Kieffer, ♀.
— 12. Abdomen de *Cardiopsilus productus*, Kieffer, vu de côté.
— 13. Une des mandibules de *Rhynchopsilus clausus*, Kieffer.
— 14 et 15. Mandibules de *Oxylabis carinata*, Kieffer.
— 16. *Acanosema brevipenne*, Kieffer.
— 17. Tête du même, vue de côté.
— 18 et 19. Mandibules de *Cinetus iridipennis*, Olivier.
— 20. Mandibule de *Cinetus angustatus*, Kieffer.
— 21. Mandibule de *Cinetns brevipetiolatus*, de Marshall.
— 22 et 23. Mandibules de *Xenotoma Goettei*, Kieffer.
— 24 et 25. Mandibules de *Leptorhaptus abbreviatus*, Kieffer.

PLANCHE 3

Fig. 1. *Oxylabis punctulata*, Kieffer, ♀.
— 2. *Belyta sanguinolenta*, Nees, ♂, d'après Vollenhoven.
— 3. *Anectata angusta*, Kieffer, ♀.
— 4. *Aclista*, ♀.
— 5. *Pantoclis brachyura*, Thomson, d'après Vollenhoven.
— 6. *Pantoclis flaviventris*, Kieffer, ♀.
— 7. *Aclista*, ♀ (*Psilomma*, selon Ashmead).
— 8. *Ismarus dorsiger*, Curtis.
— 9. *Xenotoma nigriceps*, Kieffer, ♀.
— 10. *Cinetus iridipennis*, Lepeletier, ♀.
— 11. *Leptorhaptus fungorum*, Kieffer, ♀.
— 12. *Miota luteipes*, Kieffer, ♀.

Bitche (Lorraine), 4 Mai 1910.

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